

CONSERVATION STATUS ASSESSMENT COMMENTS
1st DRAFT NORTH AMERICAN WATERBIRD CONSERVATION PLAN- MARSHBIRDS
August 17 – November 15, 2005

eg. **CONTRIBUTOR:** date of comment

[contact information for contributor](#)

Comments and suggestions.

+Response of and actions taken by Conservation Status Assessment Committee

Process Comments

Christopher Rustay

emailed to Jennifer_A_Wheeler; Katharine Parsons Thursday, August 25, 2005

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On all accounts: This is some excellent work (!) and will provide an great tool for evaluating the assessing process for each species. Better than what landbirds currently has available, I think...all in one document well documented with published material.

Please provide assessment scores for each category and every species. It *doesn't matter* whether WCA is correct (it's highly likely that you won't be), only that you have provided some guidance on a continental scale for regional planners to work from. Including a data quality/confidence/whatever score, along with the assessment scores would provide additional guidance. WCA's guidance could well be "We don't know enough about this species to have any confidence in our assessment score, so it should be a priority within regions where this species occurs to document x, y and z data to help our assessment." (This approach might also have the effect of engaging entities like JVs more fully in the waterbird conservation process.)

Equally, saying "Insufficient information" for a population estimate not only provides no information, whatsoever, for habitat conservation planners but may in fact lead folks to believe that the species is unimportant because noone cares enough about the species to hazard a guess. I have little in the way of planning information for Bonaparte's Gull in my region, as I have no estimate to go on. Surely we know that the population is greater than x or less than y. If you can hazard a PS score, you can hazard at least a range of individuals. If no one person wants to "stake their reputation" then have a group get together, review what obviously little information there is, and come to a decision. The scores can cite the group as the source rather than an individual. --- The object is not to hold the score-givers accountable, but rather, to provide some sort of continental guidance to folks trying to plan on a more regional or local level.

+ We appreciate your argument for providing scores for population attributes for which there is insufficient information. Although we currently do not supply artificial scores when information is not available, we certainly do provide guidance to regional working groups and other partners that data needs are of paramount importance for some species. Our current protocol does not accommodate the lack of information within the factor evaluations (except when assessing threats to breeding and non-breeding populations which are the most qualitative attributes assessed). As you know, the purpose of assigning factor scores is to identify the relative urgency with which conservation action should be taken for individual species. Factor scores are not an end in themselves. Our rationale for not providing artificial scores when information is insufficient is that it is usually possible to place species in conservation concern categories without having all factors known. The North American Waterbird Conservation Plan, the U.S. Shorebird Conservation Plan and IUCN (which assesses global status) all use a categorization process for identifying most vulnerable species. In contrast, the landbird protocol requires all factors to be scored because their method of identifying priorities relies on summing six factor scores (a procedure discredited by a formal review of the landbird protocol; Beissinger et al. 2000. Auk 117: 549-561). One of the difficulties with assigning a "middle-of-the-road" score (ie 3) to unknown population attributes, is that it gives conservationists a false sense that status knowledge is "complete" for this species, whereas in reality, the "unknown" factor could indicate anything from high to low vulnerability as a result of this attribute. Therefore, the Waterbird Plan has taken the approach that factor scores are assigned when "knowledge" (ie published information, best professional judgment) supports it, but if not, conservationists are alerted to the need for additional research and/or monitoring. As you have seen in the marshbird species profiles, we do provide any information that could contribute to an estimation of population size,

trend, etc. Therefore, even in the event that species experts believe the information is insufficient to make a continental estimation, partial data are available for use at regional or smaller scales. I guess, my final comment, is that we care so much about these species that we're unwilling to hazard wild guesses—believing that drawing attention to the information needs is more credible and actionable for resource managers and other partners.

[From my perspective, If there are 50,000,000 BOGU than there is little concern for the relatively few that show up in the Southern Great Plains. IF there are 25,000 then it is likely that every bird matters. If there is no guidance continentally, I have to do my own research and will perhaps come to a different conclusion that what waterbird thinkers might have wished, and is likely inconsistent with what other regions have developed.] Please be as consistent as possible with the estimate: Breeders vs. individuals are peppered throughout the NAWCP.

+ Your comment concerning the use of breeding individuals versus total individuals in the NAWCP is well-taken. These various estimates are what appear in the literature, and we felt it was more appropriate to report them as documented rather than apply conversion factors to estimate total numbers. However, we agree that it would be very helpful to have our Technical Services Committee come up with agreed-upon conversions for the different species to be able to report their numbers consistently. By the way, Delany and Scott (2002) report there are 255,000-525,000 BOGU individuals in North America.

General comment: there may be a need for WCA to rethink the assessment criteria as the inter-score calibration is not equal: TB/TN scores do not have the same assumed bell-curve shape that PT should have according to the written definitions.

+ We have struggled with the fact that three of the population attributes to which we assign factor scores are quantitative (ie PS, BD, ND) and three are qualitative (PT, TB, TN). Ideally, in developing an abstract factor scale, we would work only with quantitative information (ie continuous variables) for all six, but quantitative information concerning continental waterbird population trend does not exist for nearly all species. Furthermore, threats information is inherently qualitative (although some attempts by the landbird folks to quantify threats exist). We anticipate converting the PT factor to a quantitative measure once regional plans are completed. Regions often have access to more quantitative information than what is available at larger scales (due to the scale of typical monitoring efforts), and we hope to be able to piece regional quantitative trend data together to re-assess continental population trend within a year or so when all waterbird assessments are updated. Because PT, TB and TN are not quantitative, there is no appropriate application of the concept of "normal distribution" to developing a scale for these factors.

In the "Conservation Assessment" document: 1) Please provide a justification for the scale used to determine PS scores

+ The process for developing the PS scale involved transforming raw population size data (which were highly non-normal) to logarithms (base 10). This substantially improved the normality of their distribution. The resulting logarithmic scale ranged from 2.0 to 7.0 approximately (there were 2 species with very large population sizes and these were considered outliers with regard to the logarithmic scale). Quintiles of this scale provided the 1-5 thresholds for log-transformed population size. The justification for this approach is that we are seeking to use factor scores to identify the most at risk-species. Because there are no benchmark data that definitively associate a given population size with sustainability for the 209 species of waterbirds in the plan, we are left with assessing relative risk. That is, we answer the questions "Of all the waterbirds in the plan, which are the most in trouble? Which are the most secure?" Therefore, seeking a normal distribution through log-transformed population data is a mathematically valid way to arrange species according to their relative risk of population extinction as a result of population size vulnerability.

2) I understand the reasoning for using the same scoring criteria for colonial and non-colonial breeding waterbirds, note however, that there are now reduced reasons that a non-colonial waterbird can get a threat score because of the lack of concentration threats. Might there be an equivalence? I'm thinking something along the lines of less-mobile non-colonials might be more highly threatened by fragmented wetland habitat than the more mobile colonials? I'm no expert, and this is just a thought.

+ We appreciate your concern that non-colonial waterbirds do not have the "advantage" of having coloniality contribute to the estimation of threats. However, threats to marshbirds in general are well-

documented and important to sustainability; only 19% of marshbirds with information have tentative threat scores of less than 4. 37% of colonial waterbirds, on the other hand, have final threat scores of less than 4.

3) Is it appropriate to judge BD and ND for non-colonials on the same area-scale as colonial seabirds? Is it possible to include in the document the justification and give the reasons for the differences in land area for each score (1-5) between ND and BD. I'm fairly certain that I understand why it was done, but is this the best way to judge species for extinction risk or simply the best way to get a nice bell-shaped curve?

+ The conceptual justification for these scales is the same as for PS (see above). We are using a normal distribution to discriminate levels of relative risk. There is a practical aspect to seeking a normal distribution to identify levels of concern as well. A normal distribution provides us with a relatively small number of highly imperiled birds and birds not currently at risk. A larger number of species end up in the high concern and low concern categories, and the largest number is considered of moderate conservation concern. Since we don't know absolute risk (only relative risk), it's appropriate that most birds are "in the middle" levels of concern, and a relatively few, manageable number of species are demanding immediate and overt conservation actions (similarly a few species are safe to ignore). The reason the BD and ND scales are different is because the raw distribution data are different (ND is almost always larger than BD for each species).

Individual species accounts:

On all accounts: This is some excellent work (!) and will provide an great tool for evaluating the assessing process for each species. Better than what landbirds currently has available, I think...all in one document well documented with published material. I would suggest that when there is little or no information for arriving at a score, that a "best guess" score is given along with a confidence score from that individual/group proposing the score. (Again, no confidence associated with a published score is *significantly* better than no score at all, in my opinion.). Is it possible to have maps which have BCR or political boundaries on them? Additionally, a reference from where the map was taken would be helpful.

+ We are hoping to have BCR-specific maps at some point, but these are not necessary for continental (and international) assessment. This kind of information is available at the regional scale in some areas. As an example, attached is a distribution map for BCNH for the MANEM (Mid-Atlantic, New England, Maritimes) region (BCRs 14 and 30). We will amend all the marshbird profiles to reference the maps used—good suggestion.

Christopher Rustay

emailed to Jennifer_A_Wheeler; Katharine Parsons August 25, 2005

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2) *IF* you are going to include BBS data with PT justification(as with AMCO), include BBS data for every species where a trend has been published on the BBS website, even if you have no confidence in the sampling. It is inappropriate to use BBS to bolster your score for one species and not use it for another, if they are essentially sampled in the same manner for both species (Unless there is a % of range question that isn't addressed in the PBGR justification section). NOTE that BBS doesn't sample the entire breeding range of either of these species. Also the BBS site now has data including an additional 5 years beyond 1999.

+ Comments on BBS data: Your comment regarding BBS data is an important one. In these draft profiles, we have included information on BBS when the source authors have used or critiqued species-specific BBS data. As you noted, BBS does not cover the plan area so the data are partial for our purposes to begin with. Furthermore, we have an assessment from John Sauer that indicates BBS data are highly inadequate for 15 species of marshbirds found within the BBS portion of the plan area. BBS appropriately samples only AMCO of a list of marshbirds including American Bittern, Common Loon, Pied-billed Grebe, Sora, Sandhill Crane, Red-necked Grebe, Common Moorhen, Horned Grebe, Clapper Rail, King Rail, Eared Grebe, Virginia Rail, Least Bittern and Purple Gallinule. Data deficiencies include low and very low abundances (<1 bird/route; <0.1 bird/route), imprecise and very imprecise estimates, temporal variation in trend, and small sample size. We don't have a "blanket" policy with regard to use or reporting of BBS data, because the ecology of these species and BBS coverage is different enough that data for each species must be evaluated individually. If an expert believes BBS data are useful to estimate an individual specie's population attributes, we include their rationale and conclusions.

Lehr Brisbin

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emailed to Katharine Parsons Wednesday, September 21, 2005

Review Comments on the Species Profiles for the American Coot (*Fulica americana*) and Hawaiian Coot (*Fulica alai*)

For the North American Waterbird Conservation Plan

The single most important issue which I feel needs to be addressed in connection with these species profiles is whether or not the American and Hawaiian Coot are indeed separate and distinct species. During my extensive background research for the preparation of the accounts of these two species' accounts for the *Birds of North America* (BNA), I continually came across compelling arguments and published data for both sides of this question (i.e. whether they are indeed separate species or simply two distinct subspecies of the same single species).

I realize that the A.O.U. currently recognizes the American and Hawaiian Coots as separate species and that is why they were treated as such in the BNA, and I suppose that this is also why they are treated as separate species in the NAWCP. However, I must frankly admit that after researching these species for the BNA account, I find myself leaning more toward the single common species side of the argument. That would be completely consistent with the way in which the Common Moorhen (*Gallinula chloropus*) is treated – namely as a single species with Hawaiian populations being considered as the subspecies *G. c. sandvicensis*. Considering the probably similar habits and dispersal potential of the coots and gallinules, I am hard put to imagine why one is treated one way and the other in a different fashion as far as the taxonomic designation of the Hawaiian form is concerned. Interestingly enough, in the cases of the coots and gallinules, the morphological differentiation between the Hawaiian and mainland North American forms is a enlarged frontal shield in the case of the Hawaiian form of each of these species – what a truly remarkable coincidence!

I have read all of the arguments about the distinctiveness of the bulbous white frontal shield in the Hawaiian Coot, but reading the article on the occurrence of white-shielded coots in North America (especially in California!) by Roberson and Baptista (1988. *American Birds* 42:1241-1246) and the arguments by others concerning the white-shielded Caribbean Coot, which it has been suggested may simply be a color polymorphism with the red-shielded form of most mainland American Coots –*really* makes one wonder! The real clincher is that red-shielded American Coots also occur in Hawaii along with the Hawaiian Coots and there is really no information as to whether they are reproductively isolated or even show assortative mating there any more than Roberson and Baptista report for the two different color-shielded forms in California.

The answer to all of this is of course DNA, and it is truly *astounding* to me that no one has put some molecular genetically-inclined graduate student on this problem for a master's thesis. It should be relatively easy to get fresh samples from Hawaiian Coots in the Honolulu Zoo and/or museum specimens, and of course the mainland forms could be easily sampled from coast-to-coast.

The importance of all of this for the NAWCP should of course be obvious. For starters, including Hawaiian forms in the NAWCP seems a bit incongruous to me in many ways because of the unique aspects of those insular forms (except of course for the seabirds). Under the present situation then, the Hawaiian form should be given a high conservation priority rating, while that of the mainland American Coot should be much lower (but see other concerns listed below). It may be possible however, that what the NAWCP is doing in all of this is simply designating the conservation plight of a unique subspecies of an otherwise much more common form – or, as I have heard such situations described lately, conservation concerns are being expressed for the Hawaiian Coot as an "ESU" (evolutionarily significant unit) and thereby avoid the debate as to whether the Hawaiian form is or is not a distinct species in its own right.

+we'll identify research needs critical to marshbird conservation and your comments regarding investigation of the genetic relationship between Hawaiian and American Coot will be recorded there and forwarded to the Technical Services Committee of the Waterbird Conservation Council to be included in their compilation of science needs.

Brett Bannor

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emailed to Katharine Parsons Monday, August 22, 2005

The Common Moorhen appears basically sound. I have only two comments:

1. The moorhen does not seem to have been assigned a conservation concern status.
2. I think it might be preferable to treat the insular races of *Gallinula chloropus* separately where assigning numbers to "breeding status," "threats to breeding," and the like is concerned. The Hawaiian race

sandvicensis, after all, is far different from the mainland United States race *cachinnans* with regard to what a meaningful score is in many of these categories. Therefore, it would give a clearer conservation picture if in computing scores the data from all subspecies was not lumped together.

+the above will happen at the workshop

GISSELLE ALVARADO QUESADA

emailed Katharine Parsons Monday, August 22, 2005

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...in some cases most than comments are questions:

1-Conservation Status Assessment of Waterbird document.

Introduction, first paragraph: "..... that is committed to ensuring that waterbird population and habitats are sustained throughout the lands and oceans of continental North America".

It is not better to write: habitats are sustained throughout wetlands (more than lands) and oceans of continental North America.

2- Assessing Factor Scores

1. Population trend:

Five categories include knowledge of the population, but to me there is not a category to the unknowledge. At lest for Costa Rica, I agree with Kushlan and Hafner 2000 postulation: "nothing is known about its population sizes or trend in the region....".

At my personal view, we need another category. Like 0. Significant unknowledge about population trends.

Nothing more about the document.

+Thank you very much for sending your comments on the files we sent for your review.

Here are some answers to your questions:

1. Conservation Status Assessment of Waterbirds document. Your suggestion to replace "lands and oceans" with wetlands is right for almost all the species included in the plan, but there are some that use upland habitats (such as Bubulcus ibis). If you look on page 26 of the plan in figure 7, you'll see that we estimate 6% of all the species in the plan use uplands.

2. Your suggestion to have a score of 0 when we have no knowledge of population trend, or size, or threats etc is also important. We recognize there are many times when we don't have enough information to assign a factor score for a species. With the colonial species, we left these scores as "?" rather than give them a 0. The reason for this is that some assessment protocols (e.g. PIF for landbirds) add up all the numbers it assigns in order to arrive at an overall score. Our protocol is somewhat different because we don't sum the factor scores to get an overall score (we use a step-wise categorization process), and we believe it is better to label a factor as "unknown" rather than give it an artificial score (ie 0 might indicate to some people that population trend was not a problem since the scale is 1-5 with 5 being of the most concern; similarly assigning a score of 3 when information is unknown as PIF does, might give us the false impression that concern for a particular species is somewhere "in the middle" when in reality it might be high or low (or in the middle!). We draw special attention to species which we've not been able to rank, because not knowing is not good! Let me know if this makes sense to you!

We will use all your comments in our future discussions about particular species and also about the assessment process itself. Thanks again for all your help.

Jim Hansen

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emailed Jennifer Wheeler 09/27/2005

I won't comment on the factor scores, but I will offer some ideas that could possibly affect them.

Hunting. As a general comment on several of the species accounts, there is more weight given to the effects of hunting on populations than I think is accurate or appropriate. We're told, for example, that "over hunting" is one of the threats to breeding populations of American coots. I understand that this was found in a species account in the literature, but that doesn't make it true that it's high enough on the list of threats to be worth mentioning. Other such statements in the accounts include the following: Common moorhen - We're told that "hunting pressure may be too high."

Other threats. I think that the major threat for all of the species is habitat loss and degradation. You might consider deleting some of the minor threats that are mentioned because they are insignificant. One example is under common moorhen it also says that "road mortality" has been documented.

Helen Hands

emailed to Jennifer_A_Wheeler 09/19/2005

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Need to provide different factor scores for each subspecies because it seems like their status is very different.

+Difficult to do; recognize this as a problem with profiles

Helen Hands

emailed to Jennifer_A_Wheeler 09/19/2005

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Comment: All factor scores should probably be done by subpopulation or subspecies because they are so different among subspecies/subpopulations.

+ See H. Hands above

Michael North

emailed to Katharine Parsons 10/06/05

Second, and this is without seeing the write-ups on any other species than the yellow-billed loon, it seems some of the overall risk categories don't make sense between species. For example, the red-throated loon is much more abundant than the yellow-billed loon; is its population declining so much that it really merits "highly imperiled"? Second, while it is perfectly intuitively correct to rank the whooping crane as high (if not highly imperiled), it does not merit that rank based strictly on the criteria that its population is not declining or thought to be declining. Perhaps the rules in the next column provide some clarification, but I guess what I am getting at is the question, "Why does a species have to have a declining population to be in the high or highly imperiled categories?" Shouldn't small population size also be a criteria?

+If you have a chance to visit the Waterbird Initiative website (www.waterbirdconservation.org), you'll find a document (under Publications) that provides some of the philosophical underpinnings of the waterbird assessment process. Population trend is indeed the most important factor in determining risk of population extinction (e.g. a species can only be ranked highly imperiled if PT is 5--the score indicating greatest vulnerability), however, population size is the next most important factor. The weight given trend results from our adoption and adaptation of the categorization process used by IUCN in identifying globally threatened/imperiled species. We will be revisiting this premise and others within the next year or so as the entire waterbird assessment effort is re-evaluated.

Suzanne Fellows

emailed to Jennifer Wheeler 15 Nov 05

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The following are comments from Region 6's Migratory Bird Program on the draft Conservation Status Assessment of Waterbirds and Species Profiles. Overall, we think you have done an excellent job in pulling together an enormous amount of information especially in the short time frame you have been given. We appreciate the detailed explanation of the committee's approach to the status assessment process. You have clearly laid out the process by which you have followed.

Species Profiles: We only reviewed the profiles of species relevant to Region 6 and have very rarely commented on the biological information provided. However, we have a variety of general comments which applied to all, or a majority, of the Species Profiles.

General comments:

The sole use of verbatim quotes bothers us. We would suggest a rewrite to provide the necessary information (of course with citations) in a synopsis format. By rewriting these you could provide a more concise and informative paragraph which would be less repetitive and contain the information necessary to meet the Profiles objectives. *+The species profiles are intended to be used by species experts as working documents that contain all relevant information pertaining to status assessment. To have this "raw" information summarized for format purposes would involve interpretation on the part of non-experts facilitating the process. We considered this to be undesirable. In fact, many of the profiles are no more than two pages, so format issues seem to be minimal.*

Personal Communication Comments: Remove those which are a restatement of something which has been published (e.g., Horned Grebe: PT: "data from BBS...Russell, pers.comm.") -- this is supported by a statistical analysis and documented in Stedman 2000 and quoted there). Many of the items currently cited as pers. comm. in the TN/TB come from published accounts; we would prefer to see those cited rather than the personal communications. *+there is value in accomplishing this if the species profiles were to be published as stand-alone products of the initiative. We have no intention of doing that; rather the profiles serve as dynamic working files to capture information and provide rationale for assessment outcome*

U.S.-centric: There are several parts where the documents could be more "North America" rather than U.S. - biased. Although we realize many of the sources available are written by U.S. authors for a U.S. audience, if this is a document which covers the North American continent and associated waters, rewriting could make this less obnoxious.

State Names: spell these out! We doubt that many people outside the U.S. would know a) what states these represent or b) where in the U.S. they are located. *+good point; we will accomplish this*

Common Names: We realize common names are problematic, however we would recommend sticking with AOU listing (AOU covers the Plan area so don't use BOU names (e.g. Great Northern Diver)) and including the Spanish and French common names as well. You could use the *Handbook of the Birds of the World* as a guide. We suggest scientific name first, followed in parenthesis by common names (e.g., *Gavia immer* (Common Loon, Colimbo Grande, Plongeon imbrin)). *+again, the profiles are not meant as "publications"*

Reference to "states": as Mexico also has state boundaries, if you are referring to any specific country make sure you specify which country you are referring to. For example: Common Loon profile: ND: "Southern states"

Listing of subspecies and populations: this must be more specific to avoid mis/disinformation. We would recommend specifying subspecies by name, followed by distinct populations, followed by coverage under the Plan. For example:

Podiceps auritus (Horned Grebe)

P. a. auritus - 4 subpopulations: NW Europe, NE Europe, S Asia, E Asia: not covered by Plan

P. a. cornutus - 1 subpopulation: North American: covered by Plan

Your information would then follow on the subspecies and/or populations just covered by the Plan. *+the above recommendation is substantially accomplished by the current profiles*

Additionally, does the Plan give a conservation score based on species vulnerability, subspecies vulnerability or population vulnerability? *+species vulnerability; regional plans address the needs of subspecies/populations*

Population Size: What does the "t" after some of the numbers indicate? *+this has been clarified in the profiles; indicates total individuals in the population*

Threats to Breeding and Non-breeding Populations:

a) This needs to be made clear that you are talking about threats which occur in the breeding vs. nonbreeding seasons/localities. In many cases the "nonbreeding population" is comprised of (some of) the same individuals which make up the "breeding population". Unless you make this distinction and take a population-by-population approach to listing threats, this can be very misleading. *+threats to breeding populations are considered in TB; there is no spatial component of this factor. Clearly, birds can belong to both breeding and non-breeding populations at different times. On the other hand, sub-adult birds that require a year or more to attain sexual maturity belong only to non-breeding populations as do birds that occur in NA but don't breed within the plan area.*

b) We would suggest a list of threats and the level of their potential threat in relation to the factor scores and, where appropriate, by population/subspecies. For example: (Please note that numbers used below are just for illustration purposes and **do not** reflect a requested change.)

Sandhill Crane: TB

availability and quality of nesting habitat: 5
low annual recruitment rates: 4
changing land use and crop type: 4
habitat loss and fragmentation: 5
poaching: 4
market hunting: 2 (as this is a historic threat and no longer a problem)

Red-necked Grebe: TN:

oil spills: 5
marine pollution: 5
commercial gill-nets: 5

+this is an interesting idea that might be useful to regional working groups especially in the development of regional waterbird conservation plans. At the continental scale, we are primarily concerned with arriving at a "big-picture" assessment of all the individuals of a species occurring over a sometimes huge range. Identifying the severity of individual threats at that scale would be problematic since threats vary regionally for most birds. At the regional scale, working groups may be able to do better than ascribing a qualitative score to threats—may actually be able to quantify impact on population (e.g. x birds killed in gill nets per year).

Breeding and Non-breeding Distributions: You have listed area estimated from range maps to arrive at distributions upon which you base your factor scores and ultimately a conservation score. However, it does not appear that this entire area actually represents appropriate habitat available to these species. If these are based on historical records and the area does not change, how is an actual decrease in breeding distribution reflected in your scoring? Does this then, accurately represent what is used for a factor score and a comparison for other species? If it is not possible to get a better representation of actual breeding distribution, then within each of the distributions we would suggest including a brief statement on habitat use and/or availability.

+again, the issues of range versus habitat/locations/sites are matters of scale and habitat questions are appropriately handled by the regional working groups. The maps used to estimate range are assumed to be current; the distribution factor scores are used to discriminate large-scale differences in range (ie using a relative system with only five categories). Additionally, it is unclear how species with a limited distribution in the Plan area but with a greater global distribution were treated compared to species whose entire life time distribution was spent in the Plan area. +the marshbird assessment produces a matrix that both, identifies the relative conservation concern category of each species, and places each species in the context of its global distribution (ie range confined to North America, Western Hemisphere, Northern Hemisphere, Cosmopolitan, Peripheral (occurring in NA only marginally). Therefore, the audience of NAWCP can visualize the global responsibility conservationists in North America have for all species regardless of their relative NA conservation status. In addition, guidance is provided to regional working groups to concentrate on-the-ground activity toward species for which NA has greatest responsibility. See the plan and website for more details on this.

Maps:

The map scale is different for each species, i.e., some show global distribution, some Western Hemisphere, some Plan area, and some North America, which we found distracting. We would suggest more consistency. Based on the primary focus of this Plan, we suggest a detailed map of the species distribution within the Plan area, differentiating between breeding and nonbreeding areas. *+as indicated on the maps used in the profiles, all depict both the global distribution of each species and it's distribution within the plan area. The scales are different (ie include greater or smaller proportions of the globe) because of differences in global distribution of the 43 marshbird spp (see above)*

We prefer that maps not be color-coded but rather use different patterns for breeding vs. nonbreeding distributions.

Again, we wondered about the use of copyrighted materials.

Literature Cited and Additional References: Check for typing errors (e.g., Sandhill Crane, Meine & Archibald -- status not stagus)

Brent Ortego

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emailed to Jennifer Wheeler 10/19/05

I have noticed some species have the same size breeding grounds as wintering; yet, they have different threats assigned to these 2 distribution categories. Is there a reason for this?

+It is intentional. Across species, minimum and maximum BD and ND vary, so the scales are different.

I noticed that a number of species have equal scores but are given different conservation categories. Is this possibly due to some rule? Would you provide me a list of the rules and their definitions?

+See write-ups on line.

One of the real concerns when we go into a ranking system is that they are equivalent across faunal categories. If we compare all of the marsh birds with high conservation concern to those same ranks with colonial waterbirds, shorebirds and songbirds, will they all be of the same conservation priority? I hope this is the case.

With this thought, I looked at the rankings of marshbirds: 4 highly imperiled, 16 high, 13 moderate, 1 not at risk, and 8 information lacking. There were no low risks. They might be appropriate, but it does raise a flag.

+The approach the waterbirds initiative took was to focus the assessment on birds under the purview of the initiative -- so the assessment is a tool built by waterbird experts to guide and promote waterbird conservation. It is not an all-birds system, such as PIF's for example. However, our belief is that multi-species managers, such as you, can look across tools to make decisions. And rarely, would you have to pit the interests of a high ranking songbird with a high ranking wading bird. Finally, the information that goes into these assessments is often shaky, with varying quality across faunal categories, so we can't make too much of having just one approach. All that said, the waterbird initiative recognizes that a unified approach to species assessment would make life a little easier, and we'll be working towards that over the next few years. About there being no waterbirds in a certain category. Remember these tables show only solitary-breeders but the assessment is based on all (colonial too) waterbirds. Also, I think you would find that the factor scores cover the spread.

Texas recently completed its SWG plan ranking for species and it will be interesting to compare ranking by statewide avian experts to national experts on status of species. We started with a regularly occurring list of 500 species for the state with over 300 species that were either nominated for conservation consideration or were on some national conservation plan. The group decided to trim the list to about 190 species. We made a conscious efforts to not have everything listed as a high. We needed to be able to prioritize what funds we will have in the future. So, we produced an avian list with 39 highs, 41 mediums and 110 low conservation concerns.

+Yes, status assessment and setting of priorities has to happen at many scales, using different perspectives.

The last question. What are the definitions of scores of 1, 2, 3, 4, 5? This needs to be very clear for reviewers.

+See posted explanations.

Helen Hands

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emailed to Jennifer_A_Wheeler 10/18/2005

Assessing Factor Scores

Population Trend (PT) – no problem

Population Trend (PS) – no problem

Threats to Breeding Population (TB) – Concentration on breeding areas not a threat for many marsh birds (e.g., sandhill cranes, coots, and rails) because they are not colonial. These non-colonial species, particularly sandhill cranes, are more dispersed during the breeding season than during the non-breeding season. Scoring is difficult at the species level because some subspecies may be more threatened than others. All marsh birds have the significant known threat of wetland loss, which has been well documented. Thus, by your definition all species should get a 5. Ranking here should be changed to account for the severity or importance of these threats to each species' breeding population. I don't know how to define the categories, but I have come up with severity rankings for TB for the

harvested marsh birds. From most severe threats to least, I would have CLRA and PUGA (tied), then KIRA, VIRA, SORA, AMCO and COMO (tied), and SACR.

Threats to Non-breeding Population (TN) – Some species may be more concentrated during the non-breeding season than during the breeding season (e.g. sandhill cranes are most concentrated on water roosting areas). My comments above also apply to TN. My threat severity rankings for harvested marsh birds would be from highest to lowest: CLRA and PUGA (tied), SORA and VIRA (tied), KIRA, AMCO and COMO (tied), and SACR.

Non-breeding Distribution (ND) - I think the size ranges for TB and TN should be the same. It doesn't make sense to have the same area for breeding and non-breeding distribution result in a higher TN than TB. *+TN and TB are factors that are evaluated separately from issues of range. There is no consideration of spatial occurrence in the five threats categories. ND and BD are frequently different from each other because breeding activity takes place in a relatively small area compared to non-breeding activities.*

Species Assessment Comments

General

1. Use the most up-to-date data that you can find. BBS data through 2004 are available at <http://www.mbr-pwrc.usgs.gov/bbs/bbs.html> and http://birdcon.nbii.gov/monitoring_links.html. Many of the assessments cite trends with periods ending 6 or more years ago. *+From many technical sources and experts, we know that BBS data are inappropriate for use in assessing continental trend or population size for most waterbird species. AMCO is the only species identified (out of 43 marshbird spp) that is adequately sampled by BBS for the purposes of NAWCP status assessment.*
2. The most significant information and threats should be presented at the beginning of each section. For some species assessments (e.g., COMO), what I consider the most significant threat, habitat loss and degradation, is buried in the middle of a section. *+A reordering of listed threats was accomplished based on discussion at Marshbird Workshop*

Nanette Seto

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email to Katharine Parsons Nov 16, 2005

I had a conference call today with folks from Hawaii and Guam. I updated them on what happened at the workshop and also got some feedback on this process. Here are the highlights:

They accepted the national ranking with subspecies concerns called out in the adjacent column in the table but were still concerned that the dominant subspecies would drive the national ranking process. They proposed to have separate rankings for all subspecies (something to consider for the future). *+This concern is shared by many involved in the assessment of marshbirds and will be addressed in the review/revision of assessment to take place within the next year or so.*

They said that the species profiles do not reference existing recovery plans which have good information for the species. For example, the Hawaiian common moorhen and Hawaiian coot have very updated information in the draft Recovery Plan that is currently circulating, the Spotless Crane has a candidate listing package, and the Guam rail and Marianas common moorhen has older recovery plans. *+Information from recovery plans was incorporated into the existing COMO profile; additional material will be added as suggested.*

Someone asked that per.comm. citations also be listed in the references since we don't know everyone. *+We will incorporate this information as time allows during the next six months. Contact information of reviewers can be found in the comments log available at the waterbird website.*

The taxonomic issue was brought up regarding whether some of the common moorhen subspecies should be separate species. Sue Haig is actually working on getting genetic info on the Hawaii and Marianas moorhens but isn't funded to compare to the N. Am. moorhen. Is this something that the Initiative could support? Or at least identify as an issue for some of these species with numerous subspecies. *+This research question will be included in our summary of emerging marshbird conservation issues. In addition, the Technical Services*

Committee of the Waterbird Bird Conservation Council will be made aware of this need for inclusion in an updated science needs discussion.

Someone suggested that a map showing all the subspecies distribution would help understand why some subspecies would be of higher concern over others. (moorhen is the main example) *+Some profiles do include maps with delineations of subspecific ranges (e.g. Buff-banded Rail, Virginia Rail) and all profiles used to assess continental status include text descriptions of subspecies' BD and ND. However, the spatial scale most relevant to subspecies conservation is the regional scale and therefore, regional working groups are encouraged to include subspecific information in regional conservation plans.*

Ken Rosenberg
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emailed to Jennifer Wheeler 10/20/05

Thank you for the opportunity to review the draft species assessment for non-colonial waterbirds (Marsh birds) completed under the NAWCP. It is clear that much work has gone into gathering the information for species that went into this assessment and that many of the best experts have been involved in this process. I have found, however, that the results of this draft assessment do not do the expert information justice, and that several logical and biological flaws in the NAWCP assessment process have produced results that are often inconsistent with the goals of a species conservation assessment. I hope that in future discussions aimed at revising these draft results can get past "initiative politics" and history and focus clearly on biological issues and whether the assessment meets the needs of conservation practitioners and managers. Note that these comments are my own, with obvious input from some other members of the Partners in Flight Science Committee, but they do not reflect any official position of PIF or its Council.

My critique of the marsh bird assessment is based on the concepts of species assessment that have evolved over the last decade and are being applied widely for land birds throughout North America, for all birds in the Southeast Region, in the Southwest U.S., in Mexico, and parts of Canada. I will first review what we consider the goals and assumptions behind a species assessment and then review the results of the marsh bird assessment from that perspective.

+Part of the on-going problem select members of the landbird science committee have with the status assessment of waterbird species performed by the Waterbirds for the Americas partnership lies in the above statement. Critiques of waterbird assessments are derived from applying novel landbird goals to bird species protected under the auspices and authority of the North American Waterbird Conservation Plan (NAWCP). Although both the landbird and waterbird efforts share the general goal of conserving bird species, there are significant differences in approach to species status assessment that result from fundamental differences in life history parameters of species under consideration, spatial context of conservation activity, and intended audience and use of species assessments.

It is not clear that the goals propounded below are actually the Partners in Flight goals for species assessment. According to PIF, these are stated to be the following: "The principal objectives of this effort were to establish an unbiased means of identifying bird species that are most in need of conservation attention, and to identify areas where conservation efforts for those species are likely to be most effective." (Panjabi 2001; www.partnersinflight.org).

The goal of waterbird status assessment is very similar to the PIF goal. It is "to assist the Initiative in identifying conservation needs and priorities of waterbirds in North America." Operationally, the waterbird initiative has sought to develop an assessment process that is 1) credible through the use of a rational, documented approach that is transparent, science-based, and replicable and 2) useful as a result of being developed specifically for end-users with a manageable level of complexity appropriate for continental-scale assessment, a shelf-life appropriate to the needs of waterbird conservation, and compatibility with assessment protocols of other bird conservation initiatives at various spatial scales (Technical Services Committee; Waterbird Conservation Council. 2005. Conservation Status Assessment of Waterbirds; www.waterbirdconservation.org).

*It is **not** the waterbird goal to assess the vulnerability of species to range-wide or regional population loss (Rosenberg goal #1 below; hypothetical PIF goal?). The spatial frame of NAWCP is North America—not range-wide for all waterbird species that occur in North America (which would require a global conservation plan.) Similarly, regional assessment, an important exercise to refine priorities at the regional scale, is undertaken by regional managers and scientists collaborating within waterbird initiative regional working groups. This exercise is **not** conducted by the Technical Services Committee of the Waterbird Conservation Council which is concerned with continental scale assessment. Regional assessment is appropriately undertaken by local managers and scientists, and not by a committee charged with supplying the large-scale picture (although the Technical Services Committee provides guidance and support to regional working groups). Local managers and scientists are the front-line implementers of bird conservation, and having them intimately involved in assessing regional populations is a way to jump start on-the-ground activity.*

Regardless of operational details, the waterbird assessment goals are a strong foundation for the initiative because they were developed collaboratively within a broad waterbird partnership. Nearly 140 conservation scientists participated in developing the protocol in 2000, and another 50 “marshbird” scientists have concurred in 2005 with the appropriateness of the waterbird approach. It is clear that the waterbird scientific community believes the assessment process and products developed by the Technical Services Committee are appropriate to meet the objectives of waterbird conservation as stated in NAWCP.

What are the goals of a species assessment? I would say they are:

- (1) to assess the vulnerability of species to rangewide (or regional) extinction/extirpation from a variety of factors and to assess the importance of these various factors -- i.e. what are the reasons for a species being at risk.
- (2) to proactively identify species that may be declining or otherwise at risk and to suggest actions that not only will keep these species from becoming imperiled but will keep them as abundant functioning parts of healthy ecosystems, to be enjoyed by the public.
- (3) to proactively identify species of stewardship responsibility, so that regions with few species of high concern can still focus on proactive work to maintain a diverse and functioning ecosystem.

Goal 1 is met by many endangered species programs, BirdLife International's red list, etc, and if this is all we needed, we wouldn't need the various bird initiatives in North America. Nonetheless, our assessment should identify such species and this seems to correspond with the Highly Imperiled category in the NAWCP. Goal 2 is the "nuts and bolts" of most of our initiative work to "keep common birds common." Species in this category would be classified as High or Moderate Concern under the NAWCP. Goal 3 has been embraced by PIF and some other groups, but does not correspond with a category in the NAWCP -- species such as Clark's Grebe, various island species, and perhaps Clapper Rail represent species that are endemic to specific regions, but might be doing fine in those regions at present, but are still important for those regions to recognize as important.

*+The above comments show a regrettably superficial understanding of the NAWCP assessment process. Contrary to Rosenberg's statement, managers within regional waterbird working groups **are** guided to identify species of regional significance (the landbird “stewardship” species; see documents at www.waterbirdconservation.org). This second issue, the attempt to critique the waterbird process without becoming familiar with that process has led to several erroneous statements on the part of some in the landbird initiative.*

If we agree that these are the goals (maybe the WB group has a different goal?)

+The waterbird initiative does indeed have a different goal.

) we might agree that a "successful" assessment should be able to distinguish levels (categories) of vulnerability to some useful degree of resolution. It might be reasonable, for example, to expect an assessment to distinguish between a species that is highly vulnerable to global extinction because of small population size, small range, high threats, and/or declining (or greatly reduced from historical) population (say, a Whooping Crane), from another species that might number in the millions, have a huge range, and walk around on golf courses all winter (say,

American Coot). [Note, the WB assessment currently puts these 2 species in the same risk category].

+One of the many similarities between the waterbird and landbird protocols is the fact that population trend is considered within a specified timeframe for the purposes of status assessment. This stated timeframe is 30 years (Panjabi 2001; Kushlan et al. 2002). Therefore, it is false and misleading to claim within the context of this discussion, that the Whooping Crane is declining, since it has been steadily increasing (albeit slowly) for the past 60 years (Ellis et al. 1996).

In my experience, the most useful way to assess risk is from the top down -- that is, to give highest priority to globally imperiled species (wherever they might occur), then consider populations that are at high risk within defined regions, and give lowest priority to globally secure species that might have only local problems. We understand that not every initiative accepts this philosophy, but without this approach an assessment can result in much confusion between globally and locally imperiled species, and priorities for limited resources may be misapplied.

If we basically agree that this goal and approach to assessment is reasonable, then a useful assessment should have the following features: (1) it should adequately assess global status; (2) it should result in clearly defined and distinguishable categories of risk; (3) it should be consistent and calibrated across all species -- i.e. a certain level of risk or concern for one species should mean the same as the same level of risk or concern for another species. Over the past decade PIF has learned that calibration across species is both essential and time-consuming.

Based on these concepts, rooted in sound conservation biology, we can assess the recently distributed draft marshbird species assessment. Relative to the above goals and assumptions, the results of the draft assessment are weak at best (e.g. not clearly distinguishing the species most at risk) and at worst highly misleading (e.g. mixing species such as Whooping Crane and Coot in the same category). These results are due primarily to 3 major weaknesses or flaws in the assessment system as currently applied:

1. Lack of a truly global perspective in scoring. In terms of knowing which species are truly at high risk rangewide vs. those at risk only locally, the geographic breakdown of species in various concern categories is confusing. Is Least Grebe only of "moderate concern" in North America, even though it occurs throughout South America? Is Arctic Loon of "moderate concern" throughout its northern hemisphere range, or is that its category for the tiny North American population only? (from the scores I would guess the latter, which is not very meaningful) Similarly, is Purple Swamphen of High Concern rangewide, or just based on small and/or introduced populations within the plan area?

I suggest that a single, consistent scoring system that considers truly global range and population sizes, but allows for "plan-area" assessment of threats and trends, does the best job of placing species in relative overall concern categories.

+We appreciate your suggestion based on years spent in an effort to improve the landbird initiative's approach to prioritization. From the outset, the waterbird initiative realized that calibration was a necessary step in the assessment process, not only because assessments are relative not absolute, but also because calibration offers an additional avenue to include more scientists in a second round of review of draft scores and categories. Approximately 100 scientists participated in calibrations of factor scores for colonially-nesting species in 2001 (see NAWCP; Kushlan et al. 2002).

As stated above, the waterbird initiative has created an assessment tool to assist efforts to conserve waterbirds in North America (as defined). Our assessment process derives directly from the unifying vision of the initiative "that the distribution, diversity, and abundance of populations and habitats of breeding, migratory, and nonbreeding waterbirds are sustained or restored throughout the lands and waters of North America, Central America, and the Caribbean." Our commitment to this vision is shown not only in our scale-appropriate guidance on waterbird conservation priorities, but also in our development of on-the-ground working groups throughout the plan area. To attempt global conservation of waterbirds is currently outside the scope of our mission. In North America, we have the technical partnerships and on-the-ground infrastructure to implement waterbird conservation—we have not assembled these assets at the global scale, nor have we intended to. Only 16% of the 209 species

considered in NAWCP have range-wide distributions confined to continental North America. The remaining 175 species range far beyond North America. Our commitment is to ensure the biodiversity of waterbirds within the delineated plan area—this is stated repeatedly in the waterbird documents and website.

2. Weighting on population trend factor scores -- According to the current waterbird assessment process, only species with "significant population declines" can be placed in the "Highly Imperiled" category. (and the "High concern" category?). Nearly half of the 43 species considered in this assessment are presented with unknown or uncertain trends -- why weight a system on the factor with the poorest available data? On conservation-biology grounds, a species with other high risk factors, which may be very well known, should still be able to be classified as high concern, even if trend data are lacking. For example, to not recognize that a species with a tiny, fragmented world distribution and population that is largely restricted to highly threatened mangrove systems (Rufous-necked Wood Rail) is not at least High Concern, because we lack precise trend data, is counter to the goals of the assessment. Also, to not recognize the Whooping Crane as "highly imperiled" because its current trend may be stabilized, does not accurately reflect its true status and is misleading.

Conversely, to define "High Concern" as "populations known or thought to be declining and have some other known or potential threat" could put too much emphasis on trend, when other factors clearly balance our overall concern. For example, by this definition, Brown-headed Cowbird could be classified as high concern because of its significant population declines and the fact that people are trapping and killing them (known threat occurring). The same logic may be applied to American Coot, which may be declining in some regions, but is too widespread and abundant to be of "high concern."

*+A cursory reading of the waterbird plan protocol would shed light on the confusion expressed above. Birds are placed in the High Concern category if they have **either** a significant or apparent population decline, **or** a population size of fewer than 5,800 individuals, and at least one other high risk factor (see pg. 68 NAWCP). Rosenberg questions why emphasis is placed on a risk factor that in many instances is unknown (i.e. population trend). The reason is that the assessment process is not developed according to the quality of information available but rather according to biologically valid parameters that influence population sustainability, regardless of the state of knowledge. The IUCN, the world's leading authority on conservation status assessment, places similar emphasis on population trend in the assessment of species globally. Population trend is the leveraging factor in 4 of 5 criteria used by IUCN for categorization.*

*Rufous-necked Wood-Rail is not categorized because **both** population trend and size are unknown. We solicited the input of 5-10 tropical waterbird scientists to help fill information gaps on Central American and Caribbean species. The consensus of those who actually study these species where they occur is that this information does not currently exist for Rufous-necked Wood-Rail. However, if Rosenberg has valid data that would fill these information gaps, we would be pleased to rank the species. If not, this species and only four others were found to have data deficiencies sufficient to preclude ranking. The waterbird initiative elevates the profile of species for which significant data gaps exist to waterbird scientists and managers to prompt new studies on population status.*

As stated previously, the waterbird initiative determined to follow the successful use of the waterbird protocol to assess marshbirds for version 2 of the NAWCP. Although we proposed to replicate our work on colonial birds with 43 species of marshbirds, using substantially the same protocol and process, we did retain flexibility on improving how prioritization results are communicated. Through discussions with marshbird specialists, we found the term "highly imperiled," a term adopted from the shorebird conservation plans, did not contribute to clarity in describing the highest concern category in the waterbird conservation assessment process. Although the name of the category was found to be inadequate, the definition of the "highly imperiled" category found in NAWCP (species with significant population declines and either low populations or some other high risk factor) does reflect our understanding of the species deserving our highest level of concern. In order to avoid confusion of terms, it was the consensus of the group that the term "highly imperiled" be replaced by the term "highest conservation concern." Similarly, we replaced "not currently at risk" with the term "lowest conservation concern." These terms better reflect the fact that all bird assessments are, by necessity, relative. We do not have sufficient science-based

information for virtually all species to be able to claim that species are "highly imperiled" or "not currently at risk." We can say that some species are of higher concern than others and that is what the revised terminology accomplishes.

As a result of the initiative's work this year, all bird species in NAWCP have been assessed in a standardized manner with a protocol that has been validated by the North American waterbird scientific community. Nearly 200 scientists have participated in this process. However, the waterbird initiative anticipates undertaking a comprehensive re-evaluation of waterbird status within the next 24 months as the initiative's scope expands to include all aquatic bird species (colonial waterbirds, marshbirds, seabirds, shorebirds, waterfowl) in Mexico, Central America, the Caribbean, and South America. In addition, at this time, regional working groups throughout the current plan area will have completed their regional assessments of waterbird populations. These new sources of information (regional scale assessments and enlarged geographic and taxonomic scope) will necessitate a comprehensive review of species conservation status.

I suggest that a system that balances all the potential risk factors, and allows our knowledge of distribution and abundance to inform the assessment when other data are lacking, produces results that are most consistent with the goals of the assessment.

+The waterbird initiative agrees that placing species in categories of conservation concern benefits from balancing many factors that impinge on sustainability. Those familiar with the waterbird categorization process know that our protocol requires a simultaneous consideration of at least two factors. However, we recognize, as does the world's foremost authority on status assessment (IUCN), that some factors are more important than others in determining sustainability. For example, species already in significant population decline are more at risk than species with small distributions. Therefore, the waterbird categorization process is built on scenarios that are ranked in decreasing order of threat to sustainability. Each scenario incorporates two or more factors in determining the category of conservation concern appropriate for each species. When the waterbird protocol was developed, we were discouraged from adopting the landbird approach of summing factor scores to identify conservation concern category. The summing of factor scores was discredited by a technical review panel of the AOU (Beissinger et al. 2000), which resulted in both the shorebird plans and the waterbird plan adopting an alternative process for identifying category of conservation concern. Our categorization process is largely modeled on the system established by the IUCN which uses a conditional, step-wise categorization process.

3. Vaguely defined and poorly calibrated Threats scores. Although threats scores are qualitative and may be somewhat subjective, they are nonetheless critical to a successful overall species assessment. Lack of consistency in the application of threats scores to marsh birds (and other waterbirds) is perhaps the most serious weakness of the current assessment process. Defining the highest threat category (i.e. TB,TN=5) as "known threats are actually occurring and can be documented" and TB,TN=4 as "significant potential threats exist but not actually occurring" and allowing a diverse set of species experts to score "their" birds has resulted in a wide interpretation and application of these scores. Not surprisingly, nearly every species has been scored either a "4" or "5" and there is little opportunity to determine which species are really more threatened than others.

Are threats to non-breeding Coots really the same as those for Whooping Crane? Are threats to breeding American Bitterns really the same as those for Black Rails (and higher than those for Whooping Crane)? Are threats to Least Grebe really the same as those for Zapata Rail?! How can Zapata Rail, which may be close to extinction, not be given the highest threats scores? There are numerous other inconsistencies. The few species with a threats score of "3" are probably due to "information not available" but the message is not clear -- is Gray-breasted Crake, a secretive Neotropical species, really among the least threatened marsh bird species in all of the western hemisphere?

The PIF assessment system has adopted a set of definitions for threats based on realistic scenarios and meant to define "future conditions" for species or populations. Although still subjective, these are rather easily applied consistently for most species. This system reserves the highest score (TB,TN=5) for those species or populations that are close to extinction or regional extirpation and distinguishes between various threats that are considered "severe" from those that are more "moderate." Under the PIF system, most marsh birds would receive threats scores of at least "3" (moderate threats), but only the most critically threatened (e.g. Whooping Crane, Zapata

Rail) would receive "5"s.

*+Objections to the way the waterbird initiative describes threats are among the most ironic of all received from the landbird prioritization folks. PIF has been working on fine-tuning their prioritization process for nearly 15 years. No other area of their work has undergone more tinkering and adjustment. The original published approach to threats estimation (Carter et al. 2000) is unrecognizable in the latest version just posted on PIF's website (Panjabi 2005). Yet, the waterbird definition of threats closely resembles that developed in the shorebird plans, and the precise definitions found in the waterbird plan **are included** in the PIF definitions. For example, TB=4 as defined by PIF: "One or more of the following statements should be true: (including...) significant potential threats exist, but have not actually occurred" (Panjabi 2001). TB=4 as defined in the waterbird plan: "significant potential threats exist, but have not actually occurred; concentration results in high potential risk" (Kushlan et al. 2002). Definitions of the other scores are also very similar across all three plans.*

There is really not much to object to here, but I think this area highlights a trap into which those involved in prioritization can fall—namely, to ascribe more importance and validity to prioritization results than is warranted. Developing a qualitative scale to which incomplete data on bird populations with complex life histories and complex relationships to dynamic environments are abstracted--is not rocket science. We do not have adequate science-based information in almost all cases to make biologically precise assessments of sustainability. As a group of bird conservationists, we've developed a tool to help managers make reasonable judgments. At best, these exercises result in a general ordering of birds based on what we believe to be the most important factors impinging on their ability to persist in whatever spatial context we've carved out for ourselves.

Even with an attempt at more clearly defined scoring, however, the success of a threats assessment depends heavily on *calibration across all species by a central committee* knowledgeable about the status of all species in the assessment. Species experts from various regions are critical for supplying information about poorly known species, but they cannot be expected to know how threats for their birds compare with threats for other species in other regions. In the case of PIF (and in Mexico for all birds) an assessment committee reviewed the threats scores back and forth several times and reached consensus on all scores, so that in the end a "4" for one species means the same as a "4" for another species. The results of the marsh bird (and other waterbird) assessment suggests that this sort of central calibration across all species did not occur.

+Forty marshbird scientists and managers from Central America, the Caribbean, Mexico, the US and Canada gathered in mid-October 2005 to perform the calibration recommended above. The marshbird workshop held at the Waterbird Society meeting, to which landbird science committee members were invited, was planned in February 2005 as the venue at which calibration would take place. This kind of calibration also took place for the significantly larger group of colonially-nesting species before NAWCP was published.

In conclusion, I believe that several procedural flaws have weakened the potential value of the resulting species assessment for marsh birds. I urge the technical committee for the NAWCP to consider these issues and discuss them openly among the technical groups of the various bird initiatives. I believe that there is no one perfect species assessment system and that we all can learn much from each others' experiences. I would be happy to help in any way as the assessment for marsh birds continues.

thank you for considering these remarks,

+The waterbird status assessment team went into the initial task for colonially-nesting birds in 2000 fully intending to model all or most aspects of status assessment on the grandfather of US bird status assessment—PIF. Our intent was to use the same system used by the landbird and shorebird conservationists because we wanted waterbirds to be "in the mix" in on-the-ground conservation. We adopted the shorebird take on threats scoring because migratory shorebirds and colonial waterbirds shared the threat of congregatory behavior. We did not adopt the PIF method of summing factor scores because that had been shown to be unsound. We did not concern ourselves with global status because a very competent organization already does that (IUCN) and we wanted to develop a conservation plan

for partners in North America (as defined). It is likely that PIF landed in “global” conservation of landbirds because the range-wide distribution of many or most landbird species is confined to North America (broadly defined). In contrast, 84% of the species in the waterbird plan have distributions that range far beyond the area to which we have committed to implementing conservation. This is how the fundamental differences in approach came about.

Regardless of these divides, the waterbird initiative remains committed to working with sister bird conservation efforts to assist on-the-ground conservationists and practitioners. In 2005, the Waterbird Conservation Council committed to staffing a task force to explore ways to integrate waterbird activities with organizations and partnerships sharing mutual interests. We look forward to a renewal of productive dialogue with PIF and continued collaborative efforts with all partners.

Chuck Hunter
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emailed to Jennifer Wheeler Nov 14, 2005

Specific comments on marshbird status assessment scores and concern levels.

+The Waterbird Initiative acknowledges the astonishing commitment of time and energy the reviewer invested in critiquing the waterbird status assessment process. In the following 69 pages, the reviewer adopts the biological information contained in the NAWCP draft marshbird profiles and conducts a parallel assessment using goals, objectives, factor score definitions and thresholds all developed to assess landbird species at a world-wide scale. This academic exercise is of limited usefulness to the Initiative’s current objective of assessing the continental status of marshbirds according to the protocol developed for aquatic bird species occurring in North America, but may help inform discussions to take place in the next few years as waterbird status assessment is updated. The reviewer questions or suggests changes to the biological content of a relatively few species profiles; in almost all cases, these suggested changes to the substance of the assessment are not accompanied by referenced expert sources.

Tabular Summary of findings and comparisons among (1) an approach to scoring and assessment following Partners in Flight (PIF), except I use Action Levels to sort Continental Concern species, (2) a mixed approach using PIF scores and North American Waterbird Conservation Plan (NAWCP) assessment, (3) present draft NAWCP scores and assessments (geographic divisions dropped).

PIF Group	Species	NAWCP Group w/ PIF Scores	Species	NAWCP Group	Species
Continental Concern-Critical Recovery Species	Guam Rail Spotless Crake Zapata Rail Whooping Crane	Highest Concern (formerly Highly Imperiled)	Black Rail Guam Rail Spotless Crake Zapata Rail Hawaiian Coot Caribbean Coot Whooping Crane	Highest Concern (formerly Highly Imperiled)	Black Rail Zapata Rail Caribbean Coot
Continental Concern-Immediate Management Species	Black Rail King Rail Uniform Crake Hawaiian Coot Caribbean Coot				
Continental Concern-Management	Yellow-billed Loon Horned Grebe Yellow Rail Buff-banded Rail	High Concern	Yellow-billed Loon Yellow Rail King Rail Rufous-necked	High Concern	Red-throated Loon Yellow-billed Loon Least Grebe Pied-billed Grebe

Attention Species	Rufous-necked Wood-Rail Yellow-breasted Crake Colombian Crake		Wood-Rail Uniform Crake Yellow-breasted Crake Colombian Crake Sunbittern		Horned Grebe Red-necked Grebe Pinnated Bittern American Bittern Least Bittern Yellow Rail Ruddy Crake Guam Rail* King Rail Spotless Crake Yellow-breasted Crake Spotted Rail Purple Swamphen** Purple Gallinule Hawaiian Coot Sungrebe Sunbittern Limpkin Whooping Crane
Continental Concern-Planning and Responsibility Species	White-throated Crake Clapper Rail				
			Table continued below		

*Guam Rail according to National Zoo website is breeding in the wild again (since the early 1990's) under heavily managed conditions, but with over 400 released birds and their progeny involved. This represents a dramatic and encouraging increase from the 21 birds originally used to establish a captive breeding program. Under strict NAWCP as applied to Whooping Crane and other very rare colonial species like Bermuda Petrel, Guam Rail should only be of High Concern, not Highest Concern (right?).

**Purple Swamphen status assessment is not meant to apply to introduced exotic population in South Florida.

Tabular Summary Comparison (cont.)

PIF Group	Species	NAWCP Group w/ PIF Scores	Species	NAWCP Group	Species
Additional species in need of Management Attention	Red-throated Loon American Bittern Least Bittern Gray-necked Wood-Rail Purple Swamphen** Purple Gallinule Sunbittern Limpkin	Moderate Concern	Red-throated Loon Horned Grebe American Bittern Least Bittern White-throated Crake Gray-breasted Crake Buff-banded Rail Clapper Rail Gray-necked Wood-Rail Paint-billed Crake	Moderate Concern	Arctic Loon Pacific Loon Common Loon White-throated Crake Clapper Rail Virginia Rail Sora Common Moorhen American Coot Sandhill Crane

			Spotted Rail Purple Swamphen** Purple Gallinule American Coot Sungrebe Limpkin		
Additional species likely of local or regional interest/ concern	Arctic Loon Common Loon Least Grebe Pied-billed Grebe Red-necked Grebe Gray-breasted Crake Virginia Rail Sora Spotted Rail Common Moorhen American Coot Sandhill Crane	Low Concern	Artic Loon Red-necked Grebe Ruddy Crake Sora Common Moorhen Sandhill Crane	Low Concern	Buff-banded Rail Gray-necked Wood-Rail
Other species	Pacific Loon Pinnated Bittern Paint-billed Crake Sungrebe	Lowest Concern	Pacific Loon Common Loon Least Grebe Pied-billed Grebe Pinnated Bittern Virginia Rail	Lowest Concern (formerly Not at Risk)	
		Information Lacking		Information Lacking	Gray-breasted Crake Rufous-necked Wood-Rail Uniform Crake Colombian Crake Paint-billed Crake

For each species below, I assign scores based on the information provided in the marshbird species accounts and other information and where different from the draft NAWCP assessment (which is often the case) I explain why. I then assign the conservation status as would be the case with the PIF approach and compare with the draft assignments given by NAWCP. A key to defining factor scores using the PIF approach and how these scores are used to define conservation status is provided here. Before the species treatments I define what constitutes a Continental Concern Species and assign Action Level (latter based on an assessment of a combination of Threat and Population Trend scores) as well as a direct comparison of criteria to assign scores.

First, I define what is involved in identifying Continental Concern Species and assigning Action Levels.

+The Waterbird Initiative has not felt compelled to undertake a comprehensive technical review of the evolving PIF assessment process, but given time and resources, it might be instructive to do so. Unresolved questions remaining since 2000 when the PIF protocol was peer-reviewed (Beissinger et al 2000), include the rationale for persisting in summing up factor scores to develop a combined score when

this practice was singled out as scientifically inappropriate. In addition, the following description fails to explain why factor score thresholds are established as they are. For example what is the rationale for developing a PS scale that begins at 5=<50,000 and increases by an order of magnitude up to 1=>50,000,000? Why not start at 25,000? Why not increase by a factor of 7.5 instead of ten? Similarly, why is the distributional scale based on a doubling of area? Why not a tripling of area or some other factor? In contrast, the waterbird protocol provides this information for the determination of quantitative thresholds—ensuring rationality, transparency, and replicability.

PIF WatchList=Continental Concern approach is summarized here as follows:

CS=Combine Score: Combined Scores are used to determine species status assessments, especially to indicate level of Continental Concern, Regional Concern, and Stewardship. A species is considered to be of **Continental Concern (CC) or on the Watchlist (WL)** using this formula:

PT + PS + maximum of D (BD or ND) + maximum of T (TB or TN)

Continental Concern (CC) or Watchlist (WL) includes species with Combined Scores of 15 or more, score of 14 when TB/N + PT>4, or with score of 13 with PT=5, up to a maximum possible of 20 are identified as of Continental Concern (also referred to as “Watchlist” species). At the continental scale, three types of Continental Concern species are identified as follows: (A) species with multiple concerns, (B) species with high threats and/or declining, and (C) species that are local and/or rare.

Continental Concern Species (CC) include:

(A) Species with multiple causes for concern across their entire range: These species are considered by many to be of highest continental concern and of highest priority for conservation actions at national and international scales.

(B) Moderately abundant or widespread species with declines or high threats: These species are on the Watch List primarily because they are declining and/or threatened throughout their range, though still fairly widespread or with moderately large populations.

(C) Species with restricted distributions or low population size: These species are on the Watch List because they are restricted to a small range or have small global populations (often both). Many of these species are not known to be declining or seriously threatened at present, but many others are. We recognize that these species with small populations and restricted range are particularly vulnerable to relatively minor changes from current conditions, whether or not their populations are currently in decline.

Action Level: Ultimately, one of the most important factors for identifying priorities is identifying the level of action needed to effect conservation. Action levels, strongly implying conservation priorities when used in combination with regional combined score and percent of population, are identified when meeting the following criteria:

CR (Critical Recovery) meets criteria for Continental Concern Species with **TB/N=5**; critical recovery actions needed to prevent likely extinction or to reintroduce a species that has been extirpated.

IM (Immediate Management) meets criteria for Continental Concern Species with **TB/N=4 and PT=5**; conservation action needed to reverse or stabilize significant, long-term population declines in species with high future threats. Lack of action may lead to extirpations or extinction.

MA (Management Attention) meets criteria for Continental Concern Species with **TB/N=4 and PT<5, and TB/N=3 and PT=4 or 5**; management or other on-the-ground conservation actions needed to reverse or stabilize significant, long-term population declines in species with future moderate threats or species with high future threats regardless of population trend (below significant, long-term declines). **Some species not meeting Continental Concern threshold, may still be MA species and are likely to be**

identified as such at regional levels, these species are identified (MA).

PR (Planning and Responsibility) meets criteria for (1) **Continental Concern Species that do not meet the above criteria** and (2) **all species meeting criteria for Stewardship** that are not already also meeting continental or region concern criteria, and (3) **many local or regional interest species**; long-term Planning and Responsibility needed for species to ensure that sustainable populations are maintained for species for which an avifaunal biome (continental scale) or region has high responsibility for that species, not otherwise considered to be of regional concern. **Here we identify PR for only Continental Concern Species, Continental and Regional Stewardship to be determined later.**

Comparing PIF and NAWCP (and USSCP) criteria for assigning scores:

Population Trend (PT) indicates vulnerability due to the direction and magnitude of changes in population size within North America (Score based on Continental Trends) over the past 30 years (or where species have been lost from >50% of there range, over the past 150 years).

PT Score	PIF*	NAWCP	USSCP
5	Large population decrease	Biologically significant population decline	Significant population decline (P<0.10)
4	Possible or moderate population decrease	Apparent population decline	Apparent population decline
3	Uncertain population trend	Apparent stable population (no score given for uncertain or unknown trend)	Apparently stable population or status unknown
2	Possible or moderate increase OR population stable	Apparent population increase	Apparent population increase
1	Large population increase	Biologically significant population increase	Significant population increase

PIF PT was derived based on a combination of data sources, principally BBS tempered by local and state datasets for breeding species. For many species of waterbirds and most non-breeding species usually best professional judgment often based in part on continental trends shown in BBS and/or CBC. BBS data for many species of waterbirds should be interpreted with some caution, usually due to low relative abundance for many species on BBS. *+With one or two exceptions, almost everyone in the scientific community believes BBS data to be highly inadequate for the purposes of continental waterbird status assessment. These published authors begin with Robbins et al. (1986) who initiated the BBS, Carter et al. (2000) who introduced the PIF landbird assessment protocol, John Sauer, an acknowledged authority on the uses and interpretation of BBS data (Sauer et al. 2001), and also the large majority of marshbird BNA authors (see marshbird species profiles). For the following BNA species, published scientists point out the significant problems in using BBS data to estimate trend: PBGR, HOG, LEBI, CLRA, VIRA, PUGA. For the following species, published scientists fail to mention or use BBS data to estimate trend: YERA, BLRA, KIRA, HACO. Because of the limited spatial scale of BBS, the BBS dataset is totally irrelevant to the following marshbird species: RTLO, ARLO, COLO, YBLO, LEGR, RNGR, PIBI, RUCR, WTCR, GBCR, BBRA, GURA, RNWR, GNWR, UNCR, SPCR, YBCR, COCR, PBCR, ZARA, SPRA, PUSW, CACO, SUGR, SUBI. BBS data are inferior and unnecessary for the well-studied cranes: SACR, WHCR. Of the remaining 11% of marshbird species considered in NAWCP, only for the American Coot is there agreement that BBS is a valid dataset to examine for determination of trends. For the purposes of NAWCP, BBS always fails to provide trend information for regions outside the BBS core (e.g. Central America, the Caribbean, northern Canada). For species where BNA authors cite BBS data (AMBI, SORA, COMO), interpretation is difficult due to low abundance (<1 bird/route) as well as issues of imprecision and temporal variability. Furthermore, for these species, BBS data suggest one trend, but species experts propose opposite interpretations (e.g. for both COMO and SORA: BBS data show declines, but Delany and Scott 2002 and/or Sauer 2001 claim species are increasing).* Nevertheless, highly significant trends continentally are found among a

wide variety of waterbirds. When CBC data are available, more often than not, it corresponds with (or does not contradict) BBS data. It is difficult to ignore a particular trend when BBS and CBC indicates the same continental direction. Since waterbird trends are often dramatic and not linear, an inspection of trend graphs was often required to make a judgment as to trend score, again tempered by local and state data sets if they existed.

Quantitatively, when adequate BBS data were available (df>13 unless otherwise specified):

Significant large increase (trend >1.36%/yr, P<0.10)	1	
Significant moderate increase (>0.47 to 1.36%/ yr, P<0.10)		2
Possible increase (>0.47/yr, 0.1<P<0.35)		2
Possible increase (as above, but based on df 6-13)		2
Stable (> -0.54 to < +0.47%/yr, and UCI<0.47 OR LCI>-0.54)	2	
- except if trend is negative and P<0.10 and LCI<-0.54, then PT=4		
Trend uncertain (<-0.54%/yr or >0.47%/yr and P>0.35)		3
Trend uncertain (>-0.54%/yr and <0.47%/yr and UCI>0.47 AND LCI<-0.54)	3	
No data		3
Significant small or moderate decrease (between -0.54% and 0/yr, and LCI <-0.54 and P<0.10)		4
Possible decrease (<-0.54%/yr, 0.1<P<0.35)		4
Possible decrease (as above but based on df=6-13)		4
Significant moderate decrease (<-0.54 to -2.27%/yr, P<0.1)		4
Significant large decrease (<-2.28%/yr and P<0.10)		5

Note the only major differences among initiatives are on how to treat stable and unknown trends. PIF and USCCP score unknown trends at “3,” as an unknown trend is in itself a level of risk (higher than apparent increase, lower than possible decline), while NAWCP does not score trends when unknown at all and therefore a number of species are not assigned to a concern category as PT is usually the primary factor concern categories are determined from. Both NAWCP and USCCP score apparently stable populations as “3,” but PIF treats apparently stable population trends as essentially the same as possible increases or moderate increases (score of “2”) in recognition that a stable population is at lower risk than when population trend is unknown or possibly decreasing.


Population Size (PS) indicates vulnerability due to the total number of adult individuals in the Gglobal population for PIF and for plan area population for USSCP and NAWCP

PS Score	PIF* (Global breeding population, categories based on increasing orders of magnitude from low to high scores)	NAWCP (North America and Oceania breeding populations only, categories based on log transformed quintiles for colonial species only)	USSCP (Canada and Continental U.S breeding population only)
5	<50,000	<480	<25,000
4	50,000-500,000	480-5,800	25,000-<150,000
3	500,000 - 5 million	5,800-69,200	150,000- <300,000
2	5 million – 50 million	69,200-832,000	300,000-<1 million
1	>50 million	832,000-10 million	>1 million

+The reviewer errs in stating that the NAWCP PS score is based on breeding populations only. Nowhere in the waterbird assessment documents does this assertion appear—to the contrary, NAWCP is committed to ensuring the persistence of waterbirds in North America regardless of their activity, and the assessment process derives from this mandate. In addition, if the reviewer had made himself more familiar with Delany and Scott (2002), the source of many North American population size estimates in the marshbird profiles and apparently for his own purposes of identifying global abundance, he would refrain from this fabrication (and correct the characterization of PIF PS as breeding only). The estimates

*in Delany and Scott clearly refer to the **total** number of individuals in the population (p.10).*

*In applying PS based on PIF system for waterbirds and shorebirds, best population estimates globally, for most species based on Delany and Scott (2002) and Kushlan et al. (2002). For some shorebirds, Green Heron, most marshbirds, and many other non-colonial waterbirds, estimates were based on PIF approach using BBS data (Rich et al. 2004).

Note that both NAWCP and USSCP approaches leads to overemphasis of peripherally occurring species in planning area that are otherwise globally very numerous. However, under PIF, which includes population sizes for those species that occur widely in Eastern or Southern hemispheres, globally occurring species would likely score higher under PIF then would be the case for the other two initiatives, given the broader range in population size captured under PIF categories. *+Overemphasis is a value judgment. Since the mandate of NAWCP is to ensure the persistence of all waterbirds in North America (as defined), the status of “peripheral” species with small NA populations is a legitimate concern. The consideration of global abundance and status under the PIF process is not linked to conservation action. In contrast, the scale-appropriate status assessment of waterbirds under NAWCP is linked to on-the-ground implementation of regional waterbird conservation plans. Interest in global status is academic for PIF if it is not  rely implementing conservation actions outside portions of North America.*

Almost all species under The NAWCP approach scoring 3, 4, or 5, would be scored 5 under PIF. All shorebirds scoring 3, 4, and 5 (and some with score of 2) under USSCP would be included in scores of 4 or 5 under PIF.

The log transformed approach used by NAWCP was not recalculated when including non-colonial species but scores were applied using this approach to marshbirds anyway.

+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.

Threats Breeding (TB) and Threats Non-breeding (TN) indicate vulnerability due to the effects of current and probable future extrinsic conditions that threaten the ability of populations to survive and successfully reproduce in breeding areas in North America (Score based on Continental threats only) and for North American breeding populations to survive over the non-breeding season where ever they occur.

TB/N Score	PIF*	NAWCP	USSCP
5	<i>Extreme deterioration in the future suitability of breeding (TB) or non-breeding (TN) is expected; species is in danger of extinction (regionally: extirpation) from substantial portions of range leading to a major range contraction, or has low probability of successful reintroduction (TB) and/or survival (TB and TN) across a substantial former range. This designation should only be applied to species that are at high</i>	Known threats are actually occurring and can be documented; concentration (for TB only) results in actual risk.	Known threats are actually occurring (i.e., significant loss of critical habitat), and can be documented; concentration (for TN only) results in actual risk.

	<p>risk of extinction or extirpation from a substantial portion of range or have suffered major range contraction and future conditions are not likely to improve.</p>		
4	<p><i>Severe deterioration in the future suitability of breeding (TB) or non-breeding (TN) conditions is expected. This is essentially a “high threats” category, with basically more severe versions TB/TN=3, but for species that are not quite in danger of extinction or extirpation from significant portions of range (TB/N=5).</i></p>	<p>Significant potential threats exist, but have not actually occurred; concentrations (for TB only) results in high potential risk.</p>	<p>Significant potential threats exist (i.e., oil spills), but have not actually occurred; concentrations (for TN only) results in high potential risk.</p>
3	<p><i>Slight to moderate decline in future suitability of breeding (TB) or non-breeding (TN) conditions are expected. This is a broad category that implies anything amounting to “moderate threats.”</i></p>	<p>No known threats, or information not available; concentration (for TB only) not a risk.</p>	<p>No known threats, or information not available; concentration (for TN only) not a risk.</p>
2	<p><i>Expected future conditions for breeding (TB) or non-breeding (TN) populations are expected to remain stable; no known threats.</i></p>	<p>Threats assumed to be low from all factors including (for TB only) concentration.</p>	<p>Threats assumed to be low from all factors including (for TN only) concentration.</p>
1	<p><i>Expected future conditions for breeding (TB) or non-breeding (TN) populations are enhanced by widespread human activities or land uses. This category includes potential problem species (including exotic species if considered at all), along with species that benefit substantially from human activity</i></p>	<p>Demonstrably secure.</p>	<p>Demonstrably secure.</p>

	such as habitat fragmentation, urbanization, bird-feeding, etc.		
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Note threat scores are based on more precise definitions under PIF (for specific examples, see PIF Handbook), than the definitions used by NAWCP and USSCP (which are very similar, except concentration risk is considered for breeding only under NAWCP, while considered for non-breeding only under USSCP). It remains very unclear how consistency was enforced when species were scored using NAWCP/USSCP definitions. It remains unclear what criteria are actually used to distinguish NAWCP threat scores of 4 or 5 with respect to importance for future conservation of the species, since almost all threats identified are indeed “known and occurring.” Conversely, it remains unclear what criteria are actually used to distinguish NAWCP threat scores of 1, 2, or 3 when threats are low or not suspected at all.

Under these two latter systems, there appears to be a strong tendency for species with what would be considered under PIF to have moderate threats (“3”) to be scored much higher (“4” or “5”) under NAWCP and USSCP, but some species that are obviously under such high threats that extinction is possible (and would be scored “5” under PIF) are scored lower in the NAWCP system (usually “4,” but threats are clearly known and actually occurring [?]).

Breeding Distribution (BD) and Non-breeding Distribution (ND) indicate vulnerability due to Global geographic extent of species breeding range (BD) and smallest extent of species non-breeding range (most non-breeding sedentary range, but also considered for some species that have well-known narrow concentration points during migration for entire species.

BD/ND Score	PIF* (Global distributions, categories based on concept of doubling area starting from highest score; area estimates for Western Hemisphere based on NatureServe maps, then extrapolated to include populations for these species found in the Eastern Hemisphere)	NAWCP (North America and Oceania distributions only, categories based on log transformed quintiles for colonial species only; area estimated from maps (not necessarily NatureServe); Breeding (B) and non-breeding (N) range categories were determined separately)	USSCP (Western Hemisphere distributions only for species breeding in Canada and Continental U.S.; area estimated from maps (but not necessarily Nature Serve)
5	<500,000 km ² , or very restricted coastal areas or interior uplands	B= <450,000 km ² N=<1,300,000 km ²	<2.5% of North America (551,493 km ²)
4	>500,000 and <1,000,000 km ² , or <1,600 km of coast	B=450,000-1,500,000 km ² N=1,300,000 -4,200,000 km ²	2.5-4.9% of North America
3	>1,000,000 and <2,000,000 km ² , or >1,600 to <5,000 km of coast	B=1,500,000-5,000,000 km ² N=4,200,000 – 13,600,000 km ²	5-9.9% of North America
2	>2,000,000 and <4,000,000 km ² , or >5,000 to <8,000 km of coast	B=5,000,000 – 16,000,000 km ² N=13,600,000 – 44,000,000 km ²	10-20% of North America

1	>4,000,000 km2, or >8,000 km of coast	B=16,000,000 – 52,500,000 km2 N=44,000,000 – 140,000,000 km2	>20% of North America (4,411,940 km2)
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Note PIF and USSCP are similar in terms of category criteria and maintain the same criteria between breeding and non-breeding seasons. In addition to the many complications associated with the NAWCP approach separating breeding and non-breeding season criteria, it is apparent that marshbird ranges were not included in determining new quintiles and non-breeding ranges appear to often include breeding as well as areas used during migratory movements which further complicate interpretations. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue. A more sophisticated understanding of the waterbird method for establishing factor score thresholds would have identified the salient point as being the degree to which including marshbird data affects the kurtosis and skewness of the overall datasets (PS, BD, ND). There is no evidence that it does for any of the three quantitative factors.*

Species treatments:

Red-throated Loon

PT=4, possible or apparent decline.

Delany and Scott decline of nearly 50% since 1970's in Alaska, unknown what is trend in Canada. No trend indicated by CBC; NAWCP draft score indicates apparent decline.

PS=3

Global population is >500,000 ba (775,000 i; between 500,000 and 5 million) with NA population of about 250,000 ba (375,000 i). NAWCP draft score of 2 is based only on North American birds *+NAWCP, as the title indicates, is a plan for the conservation of North American birds* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing on what the future holds.*

TN=3, moderate threats

NAWCP draft score of 5, but no indication that threats as described are high enough to result in either extirpation from North America or high enough to result in severe deterioration in the future suitability of non-breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to*

compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.

(though they may be high enough in some regions where this species is particularly susceptible to being killed in large numbers where near-shore gill-netting is widespread).

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 2 is based on only North American breeding range (3.4 million km²; does not include Eurasian range) *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=1

Global non-breeding range exceeds 4 million km². NAWCP draft score of 3 is based on a 4 times larger area than North American breeding range, and appears to inappropriately include breeding and migration range, *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.* and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does not appear to be justified given the above information, Moderate Concern would be more appropriate. However, regional population declines and/or elevated threats do warrant High Concern status in some regions. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift in concern level from High to Moderate Concern.

PIF would not consider this species of continental concern, but would recognize this species as of regional concern in need of management attention in many regions.

Arctic Loon

PT=3, unknown trend

Unknown is scored a "3" under PIF criteria, but only a "?" is used under NAWCP *+NAWCP believes that assigning an artificial score to species for which information is lacking is misleading and trivializes the validity of scores supported by information. Because the landbird protocol continues the questionable practice of summing factor scores to identify concern categories, PIF requires that all factors receive a*

score. Thus the assignment of “3” when information on trend is lacking is not contributing to conservation assessment, but rather sustaining a discredited protocol.

PS=3

Global population estimated >500,000 to 1 million (between 500,000 and 5 million) with NA population 200 ba (300 i). NAWCP draft score of 5 is based only on North American birds, *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds that breed, migrate and winter in North America* clearly representing a very peripheral population found across Eurasia (and probably not isolated from it) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 3, no information, but no indication that threats would be any different from most other loon species nesting in the high Arctic, which under PIF happens to be a score of 3, moderate threat with respect to the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

TN=3, moderate threats

NAWCP draft score of 3, no information, but no indication that threats would be any different from most other loons feeding along coastlines of North America, which under PIF happens to also be a score of 3, moderate threat with respect to future suitability of non-breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 5 is based on only very restricted North American breeding range (36,700 km²; vast range in Eurasia not included) *+NAWCP, as the title indicates, is a plan for the conservation of North American birds* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=1

Global non-breeding range exceeds 4 million km². NAWCP draft score of 5 is based on only very restricted North American non-breeding range (same as breeding range) *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America*, using different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation status

Moderate Concern continentally under NAWCP does not appear to be justified given the above information, Low Concern would be more appropriate. However, local/ regional population may warrant higher concern status in Alaska. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Moderate Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift in concern level from Moderate to Low Concern.

PIF would not consider this species of continental concern, but would recognize this species may be of regional or local interest in Alaska.

Pacific Loon

PT=2, possible increase

CBC indicates possible increasing trends since the mid-1970's; NAWCP draft score indicates stable trend, but species account seems to support a score indicating apparent increase (?), whether possible increase or stable PIF score would be 2

PS=3

Global population is 1,000,000 ba (1,500,000 i; between 500,000 and 5 million) all in NA. NAWCP draft score of 1 is based on using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

TN=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of non-breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 3 is based on NA breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (3,118,900 km², which is lower than NatureServe estimate used in PIF), using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not*

change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.

ND=3

Global non-breeding range is between 1-2 million km². NAWCP draft score of 3 is based on 3-fold larger area than breeding range, which is the opposite of the PIF determination, appears to inappropriately include breeding and migration range, *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.* and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Moderate Concern continentally under NAWCP does not appear to be justified given the above information, Low Concern would be more appropriate. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Moderate Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift in concern level Moderate to Low Concern.

PIF would not consider this species of continental concern.

Common Loon

PT=1, large population increase

BBS=2.4%/yr, $P < 0.00$, $n=469$, $RA=0.95$; CBC also indicates steady increase; NAWCP draft score indicates stable trend; stable or decreasing according to Delany and Scott. Despite some well-documented regional declines (e.g., around Great Lakes), no reason to doubt either BBS or CBC data on increasing trend overall in North America.

PS=3

Global population is 500,000-700,000 ba (between 500,000 and 5 million) with most in NA (~575,000). NAWCP draft score of 2 is based on using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough continentally to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on*

breeding and non-breeding populations, without guessing as to what the future holds. However, regionally threats may be high enough to warrant a higher score (e.g., Great Lakes, Maritime Provinces-New England).

TN=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough continentally to result in severe deterioration in the future suitability of non-breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though they may be high enough in some regions where this species is particularly susceptible to being killed in large numbers where near-shore gill-netting is widespread or where oil spills are frequent).

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 2 is based NA breeding estimate (5.3 million km², does not include Greenland and Iceland breeding populations) *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* on using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=2

Global non-breeding range exceeds 2-4 million km². NAWCP draft score of 2 is nearly triple the size of breeding range (does not include British Isles non-breeding populations) *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and appears to inappropriately include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.*, and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Moderate Concern continentally under NAWCP does not appear to be justified given the above information (especially with respect to large population increases underway as measured by both BBS and CBC data), Lowest Concern would be more appropriate. However, regional population declines and/or elevated threats do warrant High Concern status in some regions. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Moderate Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift in concern level Moderate to Lowest Concern.

PIF would not consider this species of continental concern, but would recognize this species as of regional concern in need of management attention in several regions at least.

Yellow-billed Loon

PT=3, unknown trend

Study by Earnest et al. (2005, Condor) indicated highly variable trend for Alaska population, no data for Canada; draft marshbird score after Jekyll Island workshop indicates apparent decline, but not clear what this is based on (before workshop, draft marshbird score indicated stable trend) .

PS=5

Global population is <50,000 ba with NA population of <10,000 ba (<15,000 i). NAWCP draft score of 3 is based only on North American birds *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.* Whether only NA or global populations are considered, Yellow-billed Loon is clearly one of the least numerous waterbird species on the planet! How could it be possible to score PS a 3 for species like this?

TB=4, high threats

NAWCP draft score of 5, but no indication that threats as described are high enough to result in extirpation from North America, but they are high enough to result in severe deterioration in the future suitability of breeding conditions, *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* more so than with other high Arctic nesting species, especially if oil field exploration and development are expanding.

TN=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of non-breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though they may be high enough in some regions where this species is particularly susceptible to being killed in large numbers where near-shore gill-netting or pollution is widespread, especially if NA breeding birds are concentrated as may be the case for birds wintering in the Yellow Sea).

BD=3

Global breeding range is between 1-2 million km². NAWCP draft score of 4 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (1.0 km²; does not include Eurasian breeding populations) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=3

Global non-breeding range is between 1-2 million km². NAWCP draft score of 4 is 3.5 times the size of North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (but does not include Eurasian non-breeding range, even though some North American breeding populations apparently winter in the Yellow Sea) and appears to inappropriately include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.*, and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP appears to be justified given the above information. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this concern level, but for different reasons than identified by NAWCP (unknown trend, very small global population size and high threats breeding for PIF vs. apparent decline and extremely high threats breeding for NAWCP).

PIF would consider this species of continental concern, due to a combination of small global population, unknown population trend, high breeding threats, and moderate global distributions. This species would be recognized as in need of management attention throughout its range.

Least Grebe

PT=2, stable trend

Mexico NABCI-CONABIO draft treatment *+no reference; expert opinion?* indicates stable trend; NAWCP draft score indicates apparent decline after Jekyll Island workshop, not sure what that is based on (before workshop, draft marshbird score also indicated stable trend).

PS=3

Global population is >500,000 i (between 500,000 and 5 million, based on BBS data and extrapolated into Mesoamerica and South America) with NA population of <30,000 i. NAWCP draft score of 2 is based only on North American birds *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=2, no known threats, conditions expected to remain stable

NAWCP draft score of 4, but no indication that threats as described are high enough to be considered even moderate ("apparently quick to adapt to environmental changes") in terms of future suitability of breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid*

information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds. (so what is the NAWCP score of 4 based on?). Mexico NABCI-CONABIO draft treatment states “tolerant of manmade environments.” Threats may be high enough in some regions to warrant a higher score where severe wetland losses are occurring or anticipated, as in some of the West Indies.

TN=2, no known threats, conditions expected to remain stable

NAWCP draft score of 4, but no indication that threats as described are high enough to be considered even moderate in terms of future suitability of non-breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (so what is the NAWCP score of 4 based on?). Mexico NABCI-CONABIO draft treatment states “tolerant of manmade environments.” Threats may be high enough in some regions to warrant a higher score where severe wetland losses are occurring or anticipated, as in some of the West Indies.

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 4 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (1.8 million km²; doesn’t include vast South American range) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=1

Global non-breeding range exceeds 4 million km². NAWCP draft score of 4 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (same as breeding; doesn’t include vast South American range) and uses the log transformed quintile approach, which uses different breaks than breeding does (and if I’m reading this correctly should actually score BD=3 vs. ND=4, despite no change from breeding to non-breeding?), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does not appear to be justified given the above information, Lowest Concern would be more appropriate. However, regional population declines and/or elevated threats may warrant High or Moderate Concern status in some regions. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP’s High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift in concern level from High to Lowest concern.

PIF would not consider this species of continental concern, but would recognize this species in some regions as of regional concern (West Indies) or local interest at edge of range (Tamaulipan Brushlands).

Pied-billed Grebe

PT=2, stable or possible increase

BBS=1.1%/yr, $P < 0.23$, $n=495$, $RA=0.28$; also CBC indicates possible increase; NAWCP draft score indicates apparent decline, not sure what based on, but there are some regional declines. No reason to doubt either BBS or CBC data on increasing trend overall in North America. *+Scientists with expert knowledge of PBGR have published several reasons.*

PS=3

Global population is >500,000 ba (between 500,000 and 5 million, based on BBS data extrapolated rangewide) with NA population of about 385,000 ba (375,000 i). NAWCP draft score of 2 is based only on North American birds *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though threats may be high enough in some regions where severe wetland losses are occurring or anticipated).

TN=2, no known threats, conditions expected to remain stable

NAWCP draft score of 4, but no indication that threats as described are high enough to be considered even moderate in terms of future suitability of non-breeding conditions, *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* they are anticipated to remain stable (so what is the NAWCP score of 4 based on?).

BD=1

Global breeding range exceeds 4 million km²). NAWCP draft score of 2 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (7.5 million km²; does not include vast South American range) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=1

Global non-breeding range exceeds 4 million km². NAWCP draft score of 3 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (same as breeding range above), and uses the log transformed quintile approach, which uses different breaks than breeding does (why the difference between BD and ND with same area), including only data from

colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does not appear to be justified given the above information, Lowest Concern would be more appropriate. However, regional population declines and/or elevated threats do warrant higher concern status in some regions. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift in concern level from High to Lowest Concern.

PIF would not consider this species of continental concern, but would recognize this species as potentially of regional concern where data so warrant.

Horned Grebe

PT=5, large population decrease

BBS=-3.5%/yr, $P < 0.01$, $n = 87$, $RA = 0.35$; CBC indicates a slow decline since early 1960's (supports score of 5 overall, but 4 more recently?); NAWCP draft score indicates apparent decline but some concern that neither BBS nor CBC is sufficient. Overall, no reason to doubt either BBS or CBC data on significant declining trend overall in North America. *+Scientists with expert knowledge of this species have published several reasons.*

PS=3

Global population is >500,000 i (between 500,000 and 5 million) with NA population of >100,000 i. NAWCP draft score of 1-2 is based only on North American birds *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

TN=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of non-breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though they may be

high enough in some regions where this species is particularly susceptible to being killed in large numbers where near-shore gill-netting is widespread).

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 3 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (2.8 million km²; does not include Eurasian breeding range) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=2

Global non-breeding range is between 2-4 million km². NAWCP draft score of 3 is based on twice that of North American breeding range (opposite in PIF approach and does not include Eurasian non-breeding populations) and appears to inappropriately include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.*, and uses the log transformed quintile approach, which uses different breaks than breeding does (so why wide differences in area lead to the same score under NAWCP), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does appear to be justified given the above information *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this concern level, but for different reasons (large population decrease, moderate population size and moderate threats for PIF vs. apparent decline and extremely high non-breeding threats for NAWCP).

PIF would consider this species of continental concern, due to large population declines and moderate threats, and in need of management attention continentally.

Red-necked Grebe

PT=2, stable or possible increase

BBS=1.1%/yr, P<0.35, n=79, RA0.37; CBC indicates steady increase; NAWCP draft score indicates stable or apparent decline, not sure what based on. Relatively low RA, but combination of BBS and CBC trends support score indicating stable or possibly increasing trend.

PS=4

Global population is <500,000 i (between 50,000 and 500,000) with NA population of about 45,000 i. NAWCP draft score of 3 is based only on North American birds *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

TN=3, moderate threats

NAWCP draft score of 5, but no indication that threats as described are high enough to result in either extirpation from North America or high enough to result in severe deterioration in the future suitability of non-breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though they may be high enough in some regions where this species is particularly susceptible to being killed in large numbers where near-shore gill-netting is widespread).

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 4 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (3 million km²; not including Eurasian breeding populations) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=2

Global non-breeding range is between 2-4 million km². NAWCP draft score of 3 is based on being nearly twice that of North American breeding range (opposite in PIF approach; does not include Eurasian non-breeding populations *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America*) and appears to inappropriately include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.*, and uses the log transformed quintile approach, which uses different breaks than breeding does (so why wide differences in area lead to the same score under NAWCP), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does not appear to be justified given the above information, Low Concern would be more appropriate. However, regional population declines and/or elevated threats do warrant higher concern status in some regions. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Moderate--High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift in concern level from High to Low. PIF would not consider this species of continental concern, but would recognize this species as of regional concern in some regions, if regional data so warrant.

Pinnated Bittern

PT=2, stable trend

Mexico NABCI-CONABIO draft score indicates stable trend; NAWCP draft score indicates apparent decline after Jekyll Island workshop, not sure what that is based on (before workshop, NAWCP draft score indicated trend was unknown).

PS=4

Mexico NABCI-CONABIO draft score indicates a population size between 50,000 and 500,000, including populations elsewhere in Mesoamerica and South America. NAWCP draft treatment is marked by "?," indicating unknown population size.

TB=2, no known threats

NAWCP draft score of 4, but no indication that threats (none described in species account) are high enough to be considered even moderate in terms of future suitability of breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (so what is the NAWCP score of 4 based on?). Mexico NABCI-CONABIO draft treatment states "no significant threats," habitat (usumacinta marshes) considered secure.

TN=2, no known threats

NAWCP draft score of 4, but no indication that threats (none described in species account) are high enough to be considered even moderate in terms of future suitability of non-breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (so what is the NAWCP score of 4 based on?). Mexico NABCI-CONABIO draft treatment states "no significant threats."

BD=2

Global breeding range is between 2-4 million km². NAWCP draft score of 5 is based on the very small portion of breeding range in North America *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (524,500 km²; not including vast South America breeding range), and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all*

quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.

ND=2

Global non-breeding is between 2-4 million km². NAWCP draft score of 5 is based on the very small portion of non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (same as breeding range), and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does not appear to be justified given the above information, Lowest Concern would be more appropriate. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift in concern level from High to Lowest Concern.

PIF, through Mexico NABCI-CONABIO, would not consider this species of continental concern and apparently not of regional concern either, at least within Mexican range, that makes up most of North American range.

American Bittern

PT=4, moderate decrease

BBS=-1.6%/yr, $P < 0.06$, $n = 613$, $RA = 0.48$; BBS indicates large population decrease (barely); CBC indicates slight decline; NAWCP draft score (based on written accounts, such as BNA) also indicates apparent decline. Perhaps decrease as measured by BBS should be interpreted as data good enough to bump score up to PT=5, despite CBC data and NAWCP draft score suggesting a more moderate decrease?

PS=3

Global population is about 2 million ba (3 million i; between 500,000 and 5 million based on BBS data) with all breeding in NA. NAWCP draft score of 2 is based on using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 5, but no indication that threats as described are high enough to result in either extinction from North America or high enough to result in severe deterioration in the future suitability of breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impacting on breeding and non-breeding populations, without*

guessing as to what the future holds. (though threats may be high enough in some regions where severe wetland losses are occurring or anticipated).

TN=3, moderate threats

NAWCP draft score of 5, but no indication that threats as described are high enough to result in either extinction from North America or high enough to result in severe deterioration in the future suitability of non-breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though threats may be high enough in some regions where severe wetland losses are occurring or anticipated).

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 2 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (3.5 million km², which is below estimate from NatureServe used by PIF) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=2

Global non-breeding range is between 2 and 4 million km². NAWCP draft score of 3 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (but 8 million km² estimate is well over NatureServe estimate used by PIF), appears to inappropriately include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.*, and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does not appear to be justified given the above information (regardless of whether PT is 5 or 4), Moderate Concern would be more appropriate. However, regional population declines and/or elevated threats do warrant High Concern status in some regions. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift from High to Moderate concern. PIF would not consider this species of continental concern, but if PT=5 instead of 4, then American Bittern would meet continental concern criteria (Combined score =13, PT=5); regardless PIF would recognize this species as in need of at least management attention in many regions.

Least Bittern

PT=4, possible decrease

BBS data clearly inadequate (-0.6%/yr, $P < 0.71$, $n = 41$, $RA = 0.08$), *+Scientists with expert knowledge of this species have discounted in the scientific literature the use of BBS to estimate trends.* but widespread perception of apparent decline accepted for this species (same habitat as King Rail which is steeply declining); NAWCP draft score also indicates apparent decline.

PS=3

Global population is >500,000 ba (between 500,000 and 5 million, based on BBS data extrapolated to include South America) with NA population of ~128,000 i (85,000 i in U.S.). *+Scientists with expert knowledge of this species have discounted in the scientific literature the use of BBS to estimate abundance.* NAWCP draft score of 2 is based only on North American birds *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though threats may be high enough in some regions where severe wetland losses are occurring or anticipated).

TN=3, moderate threats

NAWCP draft score of 4, but no indication (actually no information other than potential for collisions with human structures) that threats as described are high enough to result in severe deterioration in the future suitability of non-breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though they may be high enough in some regions where this species is particularly susceptible to future habitat alteration).

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 3 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (2.8 million km²; not including South American range) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=1

Global non-breeding range is exceeds 4 million km². NAWCP draft score of 4 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North*

America, which is larger than breeding habitat (3.2 million km²; but why isn't this area smaller with major withdrawal from North America?; does not include South American range), appears to inappropriately include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.*, and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does not appear to be justified given the above information, Moderate Concern would be more appropriate. However, regional population declines and/or elevated threats do warrant High Concern status in some regions. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift in concern level from High to Moderate concern.

PIF would not consider this species of continental concern, but would recognize this species as of regional concern in need of management attention in many regions.

Yellow Rail

PT=3, unknown trend

No data from anywhere within core of breeding or non-breeding range, subspecies in central Mexico may still persist, possible decline in the very small population in the nw U.S.; NAWCP draft score indicates apparent decline, not sure what based on (but is conceivable); considered stable in Delany and Scott

PS=5

Global population is 10,000-25,000 i (<50,000) with all in NA. NAWCP draft score of 3 is based only on North American birds *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.* How could it be possible to score PS a 3 for species like this?

TB=3, moderate threat

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

Various practices are either good or bad (drainage, grazing, mowing) depending on baseline conditions, but overall moderate future threats.

TN=4, high threat

NAWCP draft score of 5, but no indication given that threats as described are high enough to result in either extinction from North America or high enough to result in severe deterioration in the future suitability of non-breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* However, wet savanna conditions are hard to maintain where fire is not an available management tool, and recent changes to rice culture (especially present and future conversion to sugarcane in many areas) do in fact support a score reflecting high threats.

BD=2

Global breeding range is between 2-4 million km². NAWCP draft score of 3 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (1.6 million km², which differs from NatureServe maps), and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=5

Global non-breeding range is below 500,000 km². NAWCP draft score of 4 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (1.9 million acres which clearly differs from Nature Serve map; how is it that non-breeding could conceivably be larger than breeding range based on any range map for this species?), appears to inappropriately include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.,* and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does appear to be justified given the above information. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this concern level, but for different reasons than identified by NAWCP (unknown trend, very small global population size, small non-breeding distribution, and high threats non-breeding for PIF vs. apparent decline and extremely high threats non-breeding for NAWCP).

PIF would consider this species of continental concern, due to a combination of small global population, small non-breeding distribution, unknown population trend, and high non-breeding threats, and moderate global distributions. This species would be recognized as in need of management attention especially on non-breeding range.

Ruddy Crake

PT=3, trend unknown

Mexico NABCI-CONABIO draft treatment indicates stable trend; NAWCP draft score indicates apparent decline, not sure what that is based on.

PS=3?

Mexico NABCI-CONABIO draft score indicates a population size between 500,000 and 5 million, including populations elsewhere in Mesoamerica. NAWCP draft treatment is marked by “?”, indicating unknown population size.

TB=2, no known threat, conditions expected to remain stable

NAWCP draft treatment is “?”, indicating threat unknown (which I thought was scored a “3” in NAWCP approach). Mexico NABCI-CONABIO draft treatment indicates “no perceived threats.”

TN=2, no known threat, conditions expected to remain stable

NAWCP draft treatment is the same as for breeding (“?”, but according to NAWCP approach, should be a “3”). As with TB, draft treatment by Mexico NABCI-CONABIO, “no perceived threats.”

BD=4

Global breeding range is between 500,000 and 1 million km². NAWCP draft score of 4 (656, 600 km²) is an indication that for breeding ranges scores of 4 and 5's tend to converge between PIF and NAWCP approaches, but similarities end there with NAWCP using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=4

Global non-breeding range is exactly the same as breeding range. NAWCP draft score of 5 though differs from breeding due to the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does not appear to be justified given the above information, Low Concern would be more appropriate. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria as applied by Mexico NABCI-CONABIO would support this shift in concern level from High to Low concern.
PIF would not consider this species of continental concern.

White-throated Crake

PT=3, trend unknown

No data; NAWCP draft score indicates possibly stable, not sure what based on. Both **Birds of Costa Rica** (Stiles and Skutch 1989) and **Birds of Panama** (Ridgely and Gynne 1989) indicate that this species is common to abundant (“the most numerous small rail in Panama”), though Taylor seems to imply this may no longer be the case?

PS=4?

Global population is unknown, but a population size most likely is 50,000-500,000, including populations elsewhere in Mesoamerica and South America. *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* NAWCP draft treatment is marked by “?” indicating unknown population size.

TB=2?, no known threats, conditions expected to remain stable

NAWCP draft score of 4, but no information is provided in support of this score. Assuming this species’ habitat is in fact stable and widespread, as described in Stiles and Skutch, and Ridgely and Gynne, this would imply no known threats, certainly no indication that threats are high enough to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

TN=2?, no known threats, conditions expected to remain stable

NAWCP draft score of 4, but no information is provided in support of this score. Certainly, there is no indication that threats are high enough to result in severe deterioration in the future suitability of non-breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

BD=5

Global breeding range is less than 500,000 km². NAWCP draft score of 5 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (197,000 km²; which appears to be about 1/2 of global range, the rest in Columbia and Ecuador), and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=5

Global non-breeding range is the same as breeding range, less than 500,000 km². NAWCP draft score of 5 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America*, and uses the log transformed quintile approach, which uses different breaks than

breeding does (but in this case does not matter), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Moderate Concern continentally under NAWCP does appear to be justified given the above information, *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Moderate Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support Moderate Concern level.

PIF would consider this species of continental concern, due to very restricted distribution and small population size, in need of Planning and Responsibility attention.

Gray-breasted Crake

PT=3, trend unknown

NAWCP draft treatment indicates unknown trend, though suggestions by Taylor that despite the rarity of this species in North America, it may have increased in recent years due to deforestation suggesting species may be undergoing a moderate increase (PT=2?).

PS=4?

Global population is unknown, but a population size most likely is 50,000-500,000, including populations elsewhere in Mesoamerica and South America. *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* NAWCP draft treatment is marked by "?," indicating unknown population size.

TB=2, no known threats, conditions expected to remain stable

NAWCP draft score of 3 (no known threats or information not available), but suggestion by Stiles (cited by Taylor) that this species may have increased greatly due to deforestation supports threat scores that reflect stability of suitable conditions (TB=2) or increasing amounts of suitable habitat due to widespread human habitat alteration (TB=1). Given rarity of species in North America, best score would seem to be TB=2.

TN=2, no known threats, conditions expected to remain stable

NAWCP draft score of 3 (no known threats or information not available), but suggestion by Stiles (cited by Taylor) that this species may have increased greatly due to deforestation supports threat scores that reflect stability of suitable conditions (TN=2) or increasing amounts of suitable habitat due to widespread human habitat alteration (TN=1). Given rarity of species in North America, best score would seem to be TN=2.

BD=1

Global breeding range exceeds 4 million km², almost all in South America. NAWCP draft score of 5 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (328,000km²; does not include South American range), and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds*

developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.

ND=1

Global non-breeding range exceeds 4 million km². NAWCP draft score of 5 is based on only North American range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (328,000km²; does not include South American range), and uses the log transformed quintile approach, which uses different breaks than breeding does (but in this case does not matter) , including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Information Lacking continentally under NAWCP does not appear to be justified given the above information, Moderate Concern would be more appropriate. However, better understanding of threats and population trend may reveal species could be considered of lower concern. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Information Lacking category. The justification for this decision is contained in the species profiles and comments from experts.*

Using PIF scoring criteria in the NAWCP framework would support this shift from Information lacking to Moderate Concern.

PIF would not consider this species of continental concern, but it could be of regional concern in some portions of Mesoamerica. However, if the species has in fact increased due to deforestation, any concern for this species would be unlikely within North America.

Black Rail

PT=5, large population decrease

Large historical declines and severe contraction of range in eastern U.S., Pacific Coast, and West Indies supports the score PT=5, but little data to suggest what trend has been in recent decades where species remains relatively numerous (U.S. Atlantic Coast); NAWCP draft score "5" based on same information.

PS=4

Global population is >60,000 i (between 50,000 and 500,000) with NA population of about 50,000 i. NAWCP draft score of 2-3 is based only on North American birds *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.* For such a rare species throughout most or all of its range, how could it be possible to score PS a 2 or a 3 for species like this?

TB=4, high threats

NAWCP draft score of 5, but no indication that threats as described are high enough to result in extirpation from North America, but are high enough to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid*

information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.

TN=4, high threats

NAWCP draft score of 4, threats are high enough to result in severe deterioration in the future suitability of non-breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

BD=5

Global breeding range is less than 500,000 km² today (formerly broader distribution in Midwest U.S. and Mid Atlantic States). NAWCP draft score of 4 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (1.1 million km²; double what North American range is today, NAWCP included in its estimate range that has not been occupied by this species for at least 70 years; does not include South American range), and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=5

Global non-breeding range is also less than 500,000 km² today. NAWCP draft score of 4 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (1.3 million km² [how could this possibly be higher than breeding range?], also includes areas long abandoned; does not include South America) appears to inappropriately include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.*, and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Highest Concern (formerly referred to as Highly Imperiled) continentally under NAWCP does not appear to be justified given the above information. This species is not facing extinction across its range, nor extirpation throughout North America. High Concern would be more appropriate. However, declines and potentially extreme threats for some populations in the West Indies and the western U.S., support designating some regional populations as of Highest Concern. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Highest Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift from Highest to High concern.

PIF would consider this species of continental concern, and would recognize that it is of high regional concern in many areas, in need of immediate management attention overall and in some regions critical recovery level of attention is clearly warranted.

Buff-banded Rail

PT=3, unknown trend

NAWCP draft use of “?” also indicates trend unknown. Taylor comments that subspecies on Nuie Island was very scarce in the 1950’s but very common by 1968, common and widespread in western Samoa. Does this actually represent an increase on these islands and elsewhere in Oceania portion of planning area?
PS=4?

Global population is unknown, but a population size most likely is 50,000-500,000 i, for all populations in Oceania (including Australasia, Philippines) with <10,000 i within Oceania planning area for NAWCP. NAWCP draft score of 3 is based only on U.S. associated Oceania islands *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America (as defined)* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=4, high threats

NAWCP draft score of 5, but no indication that threats as described are high enough to result in extirpation from Oceania portion of planning area (seems secure overall in Australasia) or to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* Pratt (1987, **The Birds of Hawaii and the Tropical Pacific**) states, “Found on virtually all predator free islands of Fiji, Wallis and Futuna, Samoa, Tonga, and Nuie...Common most places, but probably extirpated on Viti Levu and Vanua Levu (Fiji) because of the presence of mongooses.” Species may warrant a lower threat, unless there have been recent changes.

TN=4, high threats

NAWCP draft score of 5, but no indication that threats as described are high enough to result in extirpation from Oceania portion of planning area, but may be high enough to result in severe deterioration in the future suitability of non-breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (see TB).

BD=3

Global breeding range is between 1 and 2 million km². NAWCP draft score of 5 is based on only U.S. territories in Oceania breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America (as defined)* (2,900 km²; does not include Australasian range) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=3

Global non-breeding range is between 1 and 2 million km². NAWCP draft score of 5 is based on only U.S. territories in Oceania breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America (as defined)* (2,900 km²; does not include Australasian range), and uses the log transformed quintile approach, which uses different breaks than breeding does (does not make a difference here), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Low Concern continentally under NAWCP does not appear to be justified given the above information, (under NAWCP rules even scores of 5 for threats and distribution, having a ? for PT and PS=3 forces this decision). Moderate Concern would be more appropriate, unless threats are really lower than now ranked. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Low Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift from Low to Moderate Concern. PIF would consider this species of continental concern, if threat scores are correct and in need of management attention in Oceania.

Guam Rail

PT=5, large population decrease

NAWCP draft score indicates significant population decline, states extinct in the wild. However, birds have been reintroduced on Guam (Andersen Air Force Base in 1998) and an experimental population introduced and established on the snake free island of Rota, 30 miles from Guam, starting in 1989. There has been a substantial increase in both captive and wild birds, with reproduction documented for the wild birds, from 21 originally removed from the wild in the mid-1980's to about 600 birds today. Why is this species not scored PT=2 (or 1) as with Whooping Crane "as things are looking up" for this species? I'm not arguing that this score should be anything other than PT=5, but "rules are rules" aren't they?

PS=5

Global population is ~600 i, with ~400 in the wild with released birds and their progeny, and an additional 200 birds in captivity (fide National Zoo website). With 600 birds in both the wild and captivity (if these numbers are correct) why is NAWCP draft score of 5 used instead of 4, using the log transformed quintile approach including only data from colonially breeding waterbird species? *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=5, high risk of extinction, conditions not likely to improve

NAWCP draft score of 5, existing and future threats high enough to result in global extinction in the future suitability of breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-*

breeding populations, without guessing as to what the future holds., despite ongoing very aggressive management necessary to minimize threats (predation by exotic snakes and mammals).

TN=5, high risk of extinction, conditions not likely to improve

NAWCP draft score of 5, same as with TB=5.

BD=5

Global breeding range is below 500,000 million km². NAWCP draft score of 5 is based on breeding distribution on Guam (500 km²) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=5

Global non-breeding range is below 500,000 million km². NAWCP draft score of 5 is based on non-breeding distribution on Guam (500 km²), and uses the log transformed quintile approach, which uses different breaks than breeding does (does not matter here), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Highest Concern continentally under NAWCP does appear to be justified given the above information, but strict application of NAWCP criteria for PT and PS, suggests the species should be downgraded to High Concern (I'm not recommending this, but would be consistent with treatment of Whooping Crane, Bermuda Petrel, and Short-tailed Albatross). *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Highest Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework the species would be of Highest Concern, regardless of how NAWCP would score PT and PS.

PIF would consider this species of continental concern, and obviously in need of critical recovery attention (I believe this is the only marshbird where all present scores and treatments are in agreement between NAWCP and PIF approaches, except it does not appear that NAWCP rules were strictly applied for this species as they have been for other critically imperiled species).

Clapper Rail

PT=3, trend unknown

BBS=0.9%/yr, P<0.48, n=47, RA=0.24; recently considered stable, but more recent BBS points to highly variable trend overall, also low RA. California, Light-footed subspecies (Pacific coast populations) and Yuma (Lower Colorado River system) subspecies declining; BBS data also suggest Gulf of Mexico and some Atlantic coastal populations may be declining; some West Indies populations also declining; *+Scientists with expert knowledge of this species have discounted in the scientific literature the use of BBS to estimate trends.* NAWCP draft score indicates stable; trends unknown in Delany and Scott.

PS=4

Global population is <100,000 ba (between 50,000 and 500,000; based on BBS data and extrapolated to Mesoamerica, West Indies, and South American populations) with NA population of about 71,000 ba. NAWCP draft score of 2 is based only on North American birds *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though they may be high enough in some regions where populations susceptible to habitat loss especially Pacific Coast and West Indies).

TN=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of non-breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though they may be high enough in some regions where populations susceptible to habitat loss especially Pacific Coast and West Indies).

BD=4

Global breeding range is between 500,000 and 1 million km². NAWCP draft score of 4 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (1.2 million km²; does not include South America range, but still exceeds NatureServe based estimate for entire Western Hemisphere) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=4

Global non-breeding range is between 500,000 and 1 million km². NAWCP draft score of 5 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (same as breeding area; does not include South America range, but still exceeds NatureServe based estimate for entire Western Hemisphere), and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Moderate Concern continentally under NAWCP does appear to be justified overall given the above information. However, regional population declines and/or elevated threats do warrant High Concern status in some regions (at least some Pacific Coast populations, and some in the West Indies). *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Moderate Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support Moderate Concern. PIF would consider this species of continental concern, due to relatively limited distribution, relatively small population size, and overall unknown population trends and in need of planning and responsibility attention overall (but management attention or immediate management for some Pacific Coast and West Indian populations).

King Rail

PT=5, large population decrease

BBS=-7.6%/yr, $P < 0.01$, $n=39$, $RA=0.22$ *+Scientists with expert knowledge of this species have refrained from using BBS to estimate trends.*; NAWCP draft score indicates significant decline as well; trends unknown for subspecies in Cuba and central Mexico.

PS=4

Global population is estimated to be ~63,000 ba (between 50,000 and 500,000; based on BBS data extrapolated to include Cuba and Mexico) with all in NA. NAWCP draft score of 3? based on using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=4, high threats

NAWCP draft score of 4, threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (in some regions threats high enough that extirpation is imminent).

TN=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of non-breeding. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

BD=2

Global breeding range is between 2 and 4 million km² (includes much area where species has been extirpated, but populations still extant as far north as Ontario). NAWCP draft score of 3 (2.1 million km²) is based on using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds*

developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.

ND=3

Global non-breeding range is between 1 and 2 million km². NAWCP draft score of 4 (2.1 million km², which exceeds NatureServe estimate and does not correspond with the substantial withdrawal from northern breeding areas), appears to inappropriately include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.*, and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does appear to be justified given the above information. However, some regional population declines and/or elevated threats do warrant Highest Concern status in some regions. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support High Concern overall.

PIF would consider this species of continental concern in need of immediate management overall, critical recovery in some regions (Upper Midwest U.S., Great Lakes).

Virginia Rail

PT=1, large population increase

BBS=2.7%/yr, P<0.01, n=103, RA=0.03; very low detection rates, but highly significant increase that is supported by a similar strong increasing trend found with CBC data; NAWCP draft score indicate stable population, but no reason to think the BBS and especially CBC data analysis is incorrect. *+Scientists with expert knowledge of this species have published several reasons.*

PS=4

Global population is ~300,000 ba (between 50,000 and 500,000; BBS derived and extrapolated to include Mesoamerican and South American breeding populations) with NA population of about 250,000 ba. NAWCP draft score has "?," indicating unknown population size.

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

TN=2, no known threats, conditions expected to remain stable

NAWCP draft score of 4, but no indication that threats as described are either high enough to result in severe deterioration or enough to result in slight or moderate decline in the future suitability of non-breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

BD=1

Global breeding range exceeds 4 million km², which reflects a much larger range than most maps show as this species has local breeding populations through most of non-breeding range. NAWCP draft score of 3 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (1.9 million km², does not include South American range and does not include most of North America outside of traditional depictions of breeding range), and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=2

Global non-breeding range is between 2 and 4 million km². NAWCP draft score of 4 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (3.3 million km², which seems to correspond with NatureServe estimates, but does not include South American range), may include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.*, and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Moderate Concern continentally under NAWCP does not appear to be justified given the above information, Lowest Concern would be more appropriate. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Moderate Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift from Moderate to Lowest concern level.

PIF would not consider this species of continental concern, and of at best local interest in most regions.

Rufous-necked Wood-Rail

PT=4, possible decrease

Mexico NABCI-CONABIO draft treatment indicates probable decline; NAWCP draft treatment indicates unknown trend

PS=4

Mexico NABCI-CONABIO draft score indicates a population size between 50,000 and 500,000 including populations elsewhere in Mesoamerica and South America. *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* NAWCP draft treatment is marked by “?”, indicating unknown population size.

TB=4, high threats

NAWCP draft score of 4 (but no information provided). Mexico NABCI-CONABIO draft treatment however states “specialized habitat (mangroves)” under high threat of future conversion. Thus, threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

TN=4, high threats

NAWCP draft score of 4 (but no information is provided). Mexico NABCI-CONABIO draft treatment however states “specialized habitat (mangroves)” under high threat of future conversion. Thus, threats as described by Mexico NABCI-CONABIO are high enough to result in severe deterioration in the future suitability of non-breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

BD=5

Global breeding range is below 500,000 km². NAWCP draft score of 5 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (262,200 km², which is about ½ of global range including South America) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=5

Global non-breeding range is below 500,000 km². NAWCP draft score of 5 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (262, 200 km², which is about ½ of global range including South America) and uses the log transformed quintile approach, which uses different breaks than breeding does (but does not matter here), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Information Lacking continentally under NAWCP does not appear to be justified given the above information, High Concern would be more appropriate, based on Mexico NABCI-CONABIO draft treatment. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Information Lacking category. The justification for this decision is contained in the species profiles and comments from experts.*

Using PIF scoring criteria in the NAWCP framework would support this shift from Information lacking to High Concern.

PIF (using Mexico NABCI-CONABIO draft treatment) would consider this species of continental concern in need of management attention.

Gray-necked Wood-Rail

PT=4, possible decrease

Mexico NABCI-CONABIO draft treatment *+reference?* indicates probable decline, due to past deforestation; NAWCP draft treatment indicates unknown trend

PS=3

Mexico NABCI-CONABIO draft score indicates a population size between 500,000 and 5 million including populations elsewhere in Mesoamerica and South America. NAWCP draft score of 2-3? (5,800 to 832,000) is based only on North American birds *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 3, but this score indicates no known threats or information not available. Actually information is available from Mexico NABCI-CONABIO with draft treatment stating, “widespread but requires forest,” of which slight to moderate decline in future suitability of breeding conditions is expected *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (which PIF scores coincidentally as 3).

TN=3, moderate threats

NAWCP draft score of 3, but this score indicates no known threats or information not available. Actually information is available from Mexico NABCI-CONABIO with draft treatment stating, “widespread but requires forest,” of which slight to moderate decline in future suitability of non-breeding conditions is expected *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (which PIF scores coincidentally as 3).

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 4 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America*

(656,600 km²; which does not include vast majority of range in South America) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=1

Global non-breeding range exceeds 4 million km². NAWCP draft score of 5 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (656,600 km²; which is the same as breeding distribution but higher score; also does not include vast majority of range in South America), and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Low Concern continentally under NAWCP does not appear to be justified given the above information from Mexico NABCI-CONABIO draft assessment where decline along with moderate threats suggest Moderate Concern would be more appropriate. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Lowest—Low Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift from Low to Moderate Concern. PIF would not consider this species of continental concern, but would recognize this species as of regional concern in need of immediate management attention in many regions.

Uniform Crake

PT=5, large population decrease

Mexico NABCI-CONABIO *+reference?* indicates that >50% of habitat has been lost in Mexico and extirpation (extinction of nominate subspecies) from Jamaica strongly suggests species has undergone steep population decline throughout North American range; NAWCP draft score indicates unknown trend, but with the above treatment doesn't sound unknown to me.

PS=4

Global Population is likely 50,000-500,000 i. Mexico NABCI-CONABIO score indicates a population size <50,000 including populations elsewhere in Mesoamerica, *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* but not clear included South America. NAWCP draft indicates “?” unknown. Species is very likely below 50,000 i in North America, but likely over 50,000 when including South American range.

TB=4, high threats

NAWCP draft score of 4, but no indication what the level of threat would be from species account. However, Mexico NABCI-CONABIO draft score is also 4, and draft treatment states “specialized habitat; flooded primary

forest; habitat conversion to agriculture and pasture” determined to be high enough to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

TN=4, high threats

NAWCP draft score of 4, but no indication what the level of threat would be from species account. However, Mexico NABCI-CONABIO draft score is also 4, and draft treatment states “specialized habitat; flooded primary forest; habitat conversion to agriculture and pasture” determined to be high enough to result in severe deterioration in the future suitability of non-breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

BD=3

Global breeding range is between 1 and 2 million km². NAWCP draft score of 5 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (<450,000 km², does not include more extensive South American range) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=3

Global non-breeding range is between 1 and 2 million km². NAWCP draft score of 5 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (<450,000 km², does not include more extensive South American range), appears to inappropriately include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.,* and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Information Lacking continentally under NAWCP does not appear to be justified given the above information, large population decrease, small global population, and high threats indicate High Concern would be more appropriate. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP’s Information Lacking category. The justification for this decision is contained in the species profiles and comments from experts.*

Using PIF scoring criteria in the NAWCP framework would support this shift from Information Lacking to High Concern.

PIF would consider this species of continental concern, in need of immediate management attention.

Sora

PT=3

BBS=-0.4%/yr, $P < 0.45$, $n = 499$, $RA = 0.84$; thought to be increasing until recently; CBC suggests increase since 1960's and then highly variable; NAWCP draft score indicates apparent stability. Species certainly has declined in some regions, but overall trend best treated continentally as unknown.

PS=3

Global population is >500,000 ba (between 500,000 and 5 million; based on BBS data) with all populations breeding in NA. NAWCP draft score of 2 is based on using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions overall *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though they may be high enough in some regions where wetland loss is likely).

TN=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of non-breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though they may be high enough in some regions).

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 3 is based on breeding range (3.2 million km², which is lower than estimate based on NatureServe map) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=1

Global non-breeding range exceeds 4 million km². NAWCP draft score of 3 is based on an area twice the size of breeding range and appears to inappropriately include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.*, and uses the log transformed quintile approach, which uses different breaks than breeding does, including

only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Moderate Concern continentally under NAWCP does not appear to be justified given the above information, Low Concern would be more appropriate. However, regional population declines and/or elevated threats may warrant higher concern status in some regions. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Moderate Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift from Moderate to Low concern. PIF would not consider this species of continental concern, but would recognize this species as of regional concern in need of management attention in some regions where threats and population trend warrant.

Spotless Crane

PT=5; large population decrease

Taylor states this species as decreased and extirpated throughout the Pacific Islands making up the Oceania portion of this planning area, justifying the score PT=5. This and the fact that this species is a Candidate under the U.S. Endangered Species Act (i.e., enough information exists to support listing at this time) due to its extremely vulnerable status on Tau (the only island under U.S. jurisdiction, as part of American Samoa, the species occurs in planning area, and here now restricted to the summit of that island), why does NAWCP draft score indicate only apparent decline (PT=4) within the Oceanian planning area?

PS=4

Global population is likely between 50,000 and 500,000 i, perhaps less than 500 i at best within Oceania. NAWCP score of "5?" is based only on birds left on U.S. territories in the Pacific Ocean *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America (as defined) and using the log transformed quintile approach including only data from colonially breeding waterbird species. +The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=5, high risk of extirpation, conditions not likely to improve

NAWCP draft score of 4?, but available information exists that threats are high enough to result in extreme deterioration in the future sustainability of breeding thus extirpation is likely from Oceania portion of planning area (and especially from areas under U.S. jurisdiction). *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

TN=5, high risk of extirpation, conditions not likely to improve

NAWCP draft score of 4?, but available information exists that threats are high enough result in extreme deterioration in the future sustainability of non-breeding thus extirpation is likely from Oceania portion of planning area (and especially from areas under U.S. jurisdiction). *+NAWCP threats descriptions were not developed to*

speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.

BD=3

Global breeding range is between 1 and 2 million km². NAWCP draft treatment of ?, indicates unknown distribution, but if following the NAWCP criteria of scoring only U.S. territories in Oceania then area would likely be a score of 5 with less than 50 km² and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=3

Global non-breeding range is between 1 and 2 million km². NAWCP draft treatment of ?, indicates unknown distribution, but if following the NAWCP criteria of scoring only U.S. territories in Oceania then area would likely be a score of 5 with less than 50 km² and using the log transformed quintile approach, which uses different breaks than breeding does (does not matter here), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does not appear to be justified given the above information, given severity of declines and extremely high threats. Highest Concern would be more appropriate. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift from High to Highest concern level. PIF would consider this species of continental concern in need of critical recovery attention within the Oceania planning area. How is it Purple Swampphen, which appears overall to be secure in Oceania, is considered High Concern under NAWCP, while Spotless Crake apparently facing extirpation over most of Oceania, especially on U.S. territories, only considered High Concern and not Highest Concern?

Yellow-breasted Crake

PT=4, possible population decrease

Mexico NABCI-CONABIO draft score indicates probable declines; has declined on Puerto Rico, perhaps Hispaniola and Cuba as well (considered rare to today on all three islands, not clear what trends are on Jamaica); NAWCP draft score indicates unknown trend.

PS=4

Global population is likely between 50,000 and 500,000 i with North American population near 50,000(?). Mexico NABCI-CONABIO draft score PS for this species is a 5, but large range in West Indies and South America suggests it may be more numerous than 50,000. *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* NAWCP draft treatment indicates unknown population.

TB=4, high threats

NAWCP draft score of 3, no known threats or information not available. In contrast, Mexico NABCI-CONABIO treatment states, “habitat specialist, grassy fresh-water wetlands” for which threats are high enough to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* Similar concerns exist for future of the species in Puerto Rico and Hispaniola, possibly Cuba and Jamaica as well, but may be more secure elsewhere in Mesoamerica.

TN=4, high threats

NAWCP draft score of 3, no information provided, but this score indicates no known threats or information not available. In contrast, Mexico NABCI-CONABIO treatment states, “habitat specialist, grassy fresh-water wetlands” for which threats are high enough to result in severe deterioration in the future suitability of non-breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* Similar concerns exist for future of the species in Puerto Rico and Hispaniola, possibly Cuba and Jamaica as well, but may be more secure elsewhere in Mesoamerica.

BD=2

Global breeding range is between 2 and 4 million km². NAWCP draft score of 5 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (874,600 km²; does not include South American range) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=2

Global non-breeding range is between 2 and 4 million km². NAWCP draft score of 5 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (874,600 km²; does not include South American range), appears to inappropriately include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.*, and uses the log transformed quintile approach, which uses different breaks than breeding does (does not matter here), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does appear to be justified given the above information. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's*

High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.

Using PIF scoring criteria in the NAWCP framework would support High Concern level, but for different reasons (apparent declines, small global population size, high threats for PIF vs. extremely small North American population size and extremely small North American distribution).

PIF would consider this species of continental concern and in need of management attention in many regions.

Colombian Crane

PT=3, trend unknown

Trend unknown, only recently known from 2 places in Panama within North American planning area, either overlooked or has expanded from Columbia; NAWCP draft treatment also indicates trend unknown

PS=5

Global population is likely <50,000 ba with NA population of probably <50 i *+no references; expert opinion?* at two isolated locations in Panama. Given that population in North America (restricted to two localities in Panama) is well below 480, not clear why NAWCP draft treatment would indicate unknown population size.

TB=4, high threats

NAWCP draft score of “?” indicates threats unknown (but isn’t this scored TB=3 under NAWCP approach?). Very limited area involved which may be subject to threats that are high enough to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

TN=4, high threats

NAWCP draft score of “?” indicates threats unknown (but isn’t this scored TB=3 under NAWCP approach?). Very limited area involved which may be subject to threats that are high enough to result in severe deterioration in the future suitability of non-breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

BD=5

Global breeding range is less than 500,000 km² and almost all of it in Columbia and Ecuador. NAWCP draft score of 5 is based on only North American breeding range in Panama *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (16,400 km², which sounds generous; does not include 99% of range which is in South America) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=5

Global non-breeding range is less than 500,000 km² and almost all of it in Columbia and Ecuador. NAWCP draft score of 5 is based on only North American non-breeding range in Panama *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (16,400 km², which sounds generous; does not include 99% of range which is in South America), and uses the log transformed quintile approach, which uses different breaks than breeding does (does not matter here), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Information Lacking continentally under NAWCP does not appear to be justified given the above information, High Concern would be more appropriate. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Information Lacking category. The justification for this decision is contained in the species profiles and comments from experts.*

Using PIF scoring criteria in the NAWCP framework would support this shift from Information Lacking to High concern.

PIF would consider this species of continental concern in need of management attention where it occurs in Panama.

Paint-billed Crake

PT=3, trend unknown

Trend unknown, only recently known from 2 places in Panama (accidental Costa Rica) within North American planning area, where it could be overall accidental, a migrant, local resident, overlooked, or has expanded from Columbia; NAWCP draft treatment also indicates trend unknown.

PS=4

Global population is >50,000 i (between 50,000 and 500,000 i) with NA population of likely no more than 500i *+no references; expert opinion?*). Given that population in North America (restricted to two localities in Panama) is likely below 480, not clear why NAWCP draft treatment would indicate unknown population size.

TB=3, moderate threats

NAWCP draft score of “?” indicates threats unknown (but isn't this scored TB=3 under NAWCP approach?). Limited area involved which may be subject to slight to moderate decline (less than with Columbian Crake) in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

TN=3, moderate threats

NAWCP draft score of “?” indicates threats unknown (but isn't this scored TB=3 under NAWCP approach?). Limited area involved which may be subject to slight to moderate decline (less than with Columbian Crake) in the future suitability of non-breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

BD=3

Global breeding range is between 1 and 2 million km². NAWCP draft score of 5 is based on only North American breeding range in Panama *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (16,400 km², which sounds generous; does not include 99% of range which is in South America) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=3

Global non-breeding range is between 1 and 2 million km². NAWCP draft score of 5 is based on only North American non-breeding range in Panama *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (16,400 km², which sounds generous; does not include 99% of range which is in South America), and uses the log transformed quintile approach, which uses different breaks than breeding does (does not matter here), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Information Lacking continentally under NAWCP does not appear to be justified given the above information. Moderate Concern would be more appropriate. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Information Lacking category. The justification for this decision is contained in the species profiles and comments from experts.*

Using PIF scoring criteria in the NAWCP framework would support this shift from Information Lacking to Moderate concern level.

PIF would not consider this species of continental concern.

Zapata Rail

PT=5, large population decrease

Despite some recent increases in sightings, species has undoubtedly *+no references, expert opinion?* declined and retracted in distribution during the last 100 years. NAWCP draft score also indicates significant population decline.

PS=5

Birdlife International estimates <1,000 i (i.e., <50,000 i); NAWCP draft score of 4-5 indicates population may be over 480 i (seems ridiculous to suggest species with less than a 1000 total individuals would not always receive a score of 5 indicating a very high vulnerability due to very small population size) and is based on using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=5, high risk of extinction, conditions not likely to improve

NAWCP draft score of 4, but under NAWCP rules how is this possible? As with just about all marshbirds, threats are known, actually occurring and can be documented, so how is this score not TB=5? Regardless of how we try to apply poorly defined NAWCP criteria, ongoing threats as defined (future potential for habitat alteration from dry-season burning) are clearly known and actually occurring and high enough to result in extreme deterioration in the future suitability of breeding conditions leading to species potential extinction. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

TN=5, high risk of extinction, conditions not likely to improve

NAWCP draft score of 4, no information provided. As with TB, “known threats are actually occurring and can be documented” (as with just about all marshbirds) so why is this score not TN=5? Regardless of how we try to apply poorly defined NAWCP criteria, ongoing threats (future potential for habitat alteration and killing birds) are clearly high enough to result in extreme deterioration in the future suitability of non-breeding conditions leading to species potential extinction. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

BD=5

Global breeding range is below 500,000 km². NAWCP draft score of 5 is based on breeding range (21,900 km²; but this number seems huge compared to the 4,500 km² size of Zapata Swamp and the cited 1,010 km² area supposedly occupied by the species, also compare with Caribbean Coot with only 2,900 km² assigned to it, doesn't make a difference to scoring but big difference in terms of conservation requirements) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=5

Global non-breeding is below 500,000 km². NAWCP draft score of 5 is based on non-breeding range (21,900 km²; see BD discussion above, this area seems a magnitude higher than it should be for this species), and uses the log transformed quintile approach, which uses different breaks than breeding does (does not matter here), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Highest Concern continentally under NAWCP does appear to be justified given the above information, though population size and threat scores are too low, distribution size (but not scores) are too high. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Highest Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support Highest Concern level. PIF would consider this species of continental concern in need of critical recovery attention.

Spotted Rail

PT=3, trend unknown

Mexico NABCI-CONABIO draft score indicates unknown trends; extirpated from Jamaica (recent reports may involve vagrants from Cuba); NAWCP draft score indicates stable trend.

PS=4

Mexico NABCI-CONABIO draft score indicates a population size between 50,000 and 500,000 i including populations elsewhere in Mesoamerica and South America, with <50,000 in North America. This contradicts published global population size of <10,000 i, but shy behavior and very large range indicates species is likely over 50,000 i. It is not clear what NAWCP draft score of 4, which indicates population size is less than 5,800 i, is based on (North American birds likely number well over 5,800 i) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 4, but little information is provided to support threats as high enough to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* Mexico NABCI-CONABIO draft treatment states, “somewhat tolerant of human activities,” with a draft score TN=3.

TN=3, moderate threats

NAWCP draft score of 4, but no information provided to support threats as high enough to result in severe deterioration in the future suitability of non-breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* Mexico NABCI-CONABIO draft treatment states, “somewhat tolerant of human activities,” with a draft score TB=3.

BD=2

Global breeding range is between 2-4 million km². NAWCP draft score of 4 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (896,900 km²; does not include large percentage of range in South America) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=2

Global non-breeding range is between 2-4 million km². NAWCP draft score of 5 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North*

America (896,900 km² which is same as breeding but score is higher; does not include large percentage in South America) and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does not appear to be justified given the above information, Moderate Concern would be more appropriate. However, regional population declines and/or elevated threats do warrant High Concern status in some regions. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift from High to Moderate concern. PIF would not consider this species of continental concern, but would recognize this species as potentially of regional concern where data so warrant.

Purple Swamphen

PT=4, moderate population decrease

Locally occurring naturally in Oceania portion of planning area, reduction of marginal wetlands and drainage have led to population decreases; NAWCP draft score indicates apparent population decline. This treatment does not include the recent expansion and population increase for the south Florida population during the last decade; this population is exotic (likely from the Indian subcontinent or southeast Asia).

PS=3

Global population is >1 million i (between 500,000 and 5 million) with Oceania populations within planning area probably <100,000 i. NAWCP score of 2-3 is based on Oceania and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions either in American Samoa or Oceania. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

TN=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of non-breeding conditions either in American Samoa or Oceania. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current*

effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 5 is based on Oceania planning area for breeding range (2,900 km², is this the area within the “box” indicating area considered, which is for American Samoa and Niue [New Zealand] only about 450 km², or all of the Oceania planning area?) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=1

Global non-breeding range exceeds 4 million km². NAWCP draft score of 5 is based on Oceania planning area for breeding range (2,900 km², is this the area within the “box” indicating area considered, which is for American Samoa and Niue [New Zealand] only about 450 km², or all of the Oceania planning area?) and uses the log transformed quintile approach, which uses different breaks than breeding does (does not matter here), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does not appear to be justified given the above information, Moderate Concern would be more appropriate. However, regional population declines and/or elevated threats may warrant High Concern status in some regions. Regarding Oceania, it is unclear which islands and political boundaries are being considered and which area not. How is it Purple Swamphen, which appears overall to be secure in Oceania, considered High Concern under NAWCP, while Spotless Crake apparently facing extirpation over most of Oceania, especially on U.S. territories, is only considered High Concern and not Highest Concern? *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift from High to Moderate concern. PIF would not consider this species of continental concern, but would recognize this species as of regional concern in need of management attention in Oceania (but absolutely not in Florida!).

Purple Gallinule

PT=4, moderate population decrease

BBS=-1.9%/yr, P<0.81, n=27, RA=0.10; BBS and CBC with high variance, low sample size, with low detectability BBS of not much use, but local accounts across the Southeast U.S. indicate possible declines over large areas, *+Scientists with expert knowledge of this species have discounted in the scientific literature the use of BBS to estimate trends.* especially where rice culture has changed over the last several decades; NAWCP draft score indicates apparent decline.

PS=3

Global population is >500,000 ba (between 500,000 and 5 million ba) with NA population of <100,000 i. NAWCP draft score of 2-3 is based only on North American birds *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions overall *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though they may be high enough in some regions where populations susceptible to habitat loss).

TN=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 3 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (2.6 million km²; does not include vast South American range) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=1

Global non-breeding range exceeds 4 million km². NAWCP draft score of 4 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (2.6 million km², not sure how the same area could be involved as species withdraws from large portions of northern breeding range and results in a larger score; does not include South American range), appears to inappropriately include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity., and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. +The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does not appear to be justified given the above information, Moderate Concern would be more appropriate. However, regional population declines and/or elevated threats do warrant High Concern status in some regions. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift from High to Moderate concern. PIF would not consider this species of continental concern, but would recognize this species as of regional concern in need of management attention in many regions.

Common Moorhen

PT=3

BBS=0.3%/yr, $P < 0.87$, $n=122$, $RA=0.53$; recent BBS data has moved from stable or moderate increase to highly variable population trend; CBC indicates increasing trend until mid-1990's then steep decline (parallels BBS?); NAWCP draft score indicates stable trend overall; Marianas and Hawaiian populations have undergone historical declines

PS=2

Global population is 5-7.5 million i (between 5 million and 50 million) with NA population of 872,000 ba (1.3 million i, based on BBS data). NAWCP draft score of 1 is based only on birds in North America, Hawaiian, and U.S. territories in Oceania *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (except in Hawaii and the Mariannas where threats are clearly higher) .

TN=2, no known threats, conditions expected to remain stable

NAWCP draft score of 3, but no indication that threats as described are high enough to result in slight or moderate decline in the future suitability of non-breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (except in Hawaii and the Mariannas where threats are clearly higher).

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 2 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (5.0 million km²; does not include extensive Southern and Eastern hemispheric ranges) and using the log transformed

quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=1

Global non-breeding range exceeds 4 million km². NAWCP draft score of 3 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (5.0 million km², not sure how the same area could be involved as species withdraws from large portions of northern breeding range and results in a larger score; does not include extensive Southern and Eastern hemispheric ranges), appears to inappropriately include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.*, and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Moderate Concern continentally under NAWCP does not appear to be justified given the above information, Low Concern would be more appropriate. However, regional population declines and/or elevated threats do warrant High Concern status in some regions (Oceania). *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Low—Moderate Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift in Moderate to Low concern. PIF would not consider this species of continental concern, but would recognize this species as of regional concern in Oceania (Hawaii and Marianas).

Hawaiian Coot

PT=5, large population decrease

NAWCP draft score indicates apparent stability; considered stable in Delany and Scott; but score of 5 in recognition of well-documented historical drastic declines. *+NAWCP and PIF consider population trend within the past 30 years; considering historical trends violates PIF's definition of population trend*

PS=5

Global population is <5000 ba (<50,000) with all birds on the Hawaiian islands. NAWCP score of 4 is based on using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=4, high threats

NAWCP draft score of 5, but no indication that threats as described are high enough to result in extinction from Hawaii, but are high enough to result in severe deterioration in the future suitability of breeding conditions.

+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.

TN=4, high threats

NAWCP draft score of 5, but no indication that threats as described are high enough to result in extinction from Hawaii, but are high enough to result in severe deterioration in the future suitability of non-breeding conditions.

+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.

BD=5

Global breeding range is less than 500,000 km². NAWCP draft score of 5 is based on breeding range (32,800 km²) and using the log transformed quintile approach including only data from colonially breeding waterbird species.

+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.

ND=5

Global non-breeding range is less than 500,000 km². NAWCP draft score of 5 is based on non-breeding range (32,800 km²), and uses the log transformed quintile approach, which uses different breaks than breeding does (does not matter here), including only data from colonially breeding waterbird species.

+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.

Conservation Status

High Concern continentally under NAWCP does not appear to be justified given the above information, with large (historical) population decrease and very low population size along with high threats and small distribution, Highest Concern would be more appropriate. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift from High to Highest concern level. PIF would consider this species of continental concern and in need of immediate management (but not critical recovery) attention.

American Coot

PT=4, possible population decrease

BBS=-0.8%/yr, $P < 0.3$, $n=585$, $RA=2.11$, BBS indicates recent shift from possible increase to now possible decrease starting in the early 1990's; CBC indicates variable but stable trend overall; NAWCP draft score indicates apparent stability; possible declines in Mesoamerica (Taylor).

PS=3

Global population is <5 million ba (>6 million i; between 500,000 and 5 million) with almost all birds breeding in NA population (several small populations in Andes of Columbia and northern Ecuador) of about 250,000 ba (375,000 i). NAWCP score of 1 is based only on North American birds *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though they may be high enough in some regions where populations susceptible to habitat loss).

TN=3, moderate threats

NAWCP draft score of 3, but this score indicates no known threats or information not available which contradicts information present in account. Regardless, until recently TN=2 using PIF approach, no known threats, conditions expected to remain stable, but documentation of AVM (a neurological disease associated with birds that feed on aquatic vegetation in certain large impounded waterways, reservoirs) killing many thousands of wintering coots every few years in the Southeast U.S. results in bumping TN=3 (the large regional scale of this threat appears to correspond with the slight population decrease now evident in continental BBS data, both in time and extent).

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 2 is based on North American breeding range (7.7 million km²; does not include very small South American range) *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=1

Global non-breeding range exceeds 4 million km². NAWCP draft score of 3 is based on North American non-breeding range (7.8 million km², slightly larger than breeding range but score one point higher; does not include very small South American range) *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America*, appears to inappropriately include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of*

ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity., and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Moderate Concern continentally under NAWCP does appear to be justified given the above information. However, regional population declines and/or elevated threats may warrant High Concern status in some regions. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Low—Moderate Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this Moderate Concern. PIF would not consider this species of continental concern, but would recognize this species as of regional concern in need of management attention in some regions.

Caribbean Coot

PT=5, large population decreases

Historical declines overall, especially east of Hispaniola, but not considered globally threatened (Taylor); NAWCP draft score indicates significant population decline

PS=5

Global population is <50,000 ba with all birds in NA. NAWCP population size is considered unknown, but using the above maximum estimated population size score would be a “3.”

TB=4, high threats

NAWCP draft score of 5, but no indication that threats as described are high enough to result in extinction from West Indies, but are high enough to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

TN=4, high threats

NAWCP draft score of 5, but no indication that threats as described are high enough to result in extinction from West Indies, but are high enough to result in severe deterioration in the future suitability of non-breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

BD=5

Global breeding range is less than 500,000 km². NAWCP draft score of 5 is based on breeding range (2,900 km²; this seems way too low when compared to Zapata Rail, the other West Indian endemic species in this assessment which is given 21,900 km², but this number seems huge compared to the 4,500 km² size of Zapata Swamp and the cited 1,010 km² area supposedly occupied by that species, doesn't make a difference to scoring but big difference in terms of conservation requirements) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=5

Global non-breeding range is less than 500,000 km². NAWCP draft score of 5 is based on non-breeding range (2,900 km²; see BD discussion above, this area seems a magnitude lower than it should be for this species), and uses the log transformed quintile approach, which uses different breaks than breeding does (does not matter here), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Highest Concern continentally under NAWCP does appear to be justified given the above information. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Highest Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support Highest Concern level.

PIF would consider this species of continental concern and in need of immediate management (but not critical recovery) attention.

Sungrebe

PT=3, trend unknown

Mexico NABCI-CONABIO draft treatment indicates unknown trends; NAWCP draft score indicates apparent decline, not sure what based on.

PS=4?

Mexico NABCI-CONABIO draft score indicates a population size between 50,000 and 500,000, including populations elsewhere in Mesoamerica and South America. *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* NAWCP draft treatment is marked by "?," indicating unknown population size.

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on*

breeding and non-breeding populations, without guessing as to what the future holds. Mexico NABCI-CONABIO with draft treatment stating, “specialized habitat (mangroves, primary forested streams),” of which slight to moderate decline in future suitability of breeding conditions is expected.

TN=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of non-breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* Mexico NABCI-CONABIO with draft treatment stating, “specialized habitat (mangroves, primary forested streams),” of which slight to moderate decline in future suitability of non-breeding conditions is expected.

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 5 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (1.2 million km²; does not include vast South American range) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=1

Global non-breeding range exceeds 4 million km². NAWCP draft score of 5 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (1.2 million km²; does not include vast South American range) and uses the log transformed quintile approach, which uses different breaks than breeding does (does not matter here), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does not appear to be justified given the above information, Moderate Concern would be more appropriate. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift from High to Moderate concern. PIF would not consider this species of continental concern.

Sunbittern

PT=4, possible population decrease

Mexico NABCI-CONABIO draft treatment states “probably has declined; NAWCP draft score indicates apparent decline

PS=4?

Mexico NABCI-CONABIO draft score indicates a population size between 50,000 and 500,000, including populations elsewhere in Mesoamerica and South America. *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* NAWCP draft treatment is marked by “?”, indicating unknown population size.

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

Mexico NABCI-CONABIO with draft treatment stating, “slight to moderate decline expected” in future suitability of breeding conditions.

TN=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of non-breeding conditions. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

Mexico NABCI-CONABIO with draft treatment stating, “slight to moderate decline expected” in future suitability of non-breeding conditions.

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 5 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (485,100 km²; does not include vast South American range) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=1

Global non-breeding range exceeds 4 million km². NAWCP draft score of 5 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (485,100 km²; does not include vast South American range) and uses the log transformed quintile approach, which uses different breaks than breeding does (does not matter here), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does appear to be justified given the above information. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's*

High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.

Using PIF scoring criteria in the NAWCP framework would support High Concern level. PIF would not consider this species of continental concern, but would recognize this species as of regional concern in need of management attention in some regions..

Limpkin

PT=4, possible or moderate population decrease

Definite historical range reduction in FL, PR, possibly also in Mesoamerica, otherwise stable; BBS data not useful; CBC data highly variable, but decline since the 1950's in FL with apparent stability overall in recent decades. Mexico NAMCI-CONABIO indicates stable in Mexico; NAWCP draft score suggests apparent decline (but with a “?”)

PS=3

Global population is >1 million i (between 500,000 and 5 million) with NA population of <50,000 i. NAWCP draft score of 3 is based only on North American birds *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though they may be high enough in some regions). Mexico NABCI-CONABIO with draft treatment stating, “slight deterioration expected (highly specialized in large water snails)” in future suitability of breeding conditions.

TN=3, moderate threats

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though they may be high enough in some regions). Mexico NABCI-CONABIO with draft treatment stating, “slight deterioration expected (highly specialized in large water snails)” in future suitability of non-breeding conditions.

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 4 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (1.25 million km²; does not include vast South American range) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all*

quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.

ND=1

Global non-breeding range exceeds 4 million km². NAWCP draft score of 5 is based on only North American non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (1.25 million km², same as with breeding, but higher score; does not include vast South American range) and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does not appear to be justified given the above information, Moderate Concern would be more appropriate. However, regional population declines and/or elevated threats do warrant High Concern status in some regions. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.*

Using PIF scoring criteria in the NAWCP framework would support this shift from High to Moderate concern. PIF would not consider this species of continental concern, but would recognize this species as of regional concern in need of management (or higher) attention in some regions (Florida, Puerto Rico).

Sandhill Crane

PT=1, large population increase

BBS=6.8%/yr, $P<0.00$, $n=367$, $RA=1.15$; BBS is tracking recent population increases for Greater and Florida subspecies; Mississippi and Cuban subspecies are highly vulnerable though also slightly increasing. CBC data suggest a steep drop in numbers about 1985 and then stability since for "mid-continent" populations, which are dominated by Arctic breeding populations (Lesser and Canadian subspecies), but all accounts for these populations indicate overall stable populations since the 1960's so not sure what CBC is tracking; NAWCP draft score indicates overall stable trend, which is contradicted by at least BBS data.

PS=3

Global population is between 525,000 and 650,000 i (between 500,000 and 5 million) with all wintering in NA population (but some breeding in Siberia). NAWCP draft score of 2 is based on using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

TB=3

NAWCP draft score of 4, but no indication that threats overall as described are high enough to result in severe deterioration in the future suitability of breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though they are high enough [or higher] in some regions where populations are highly vulnerable to future habitat loss especially Mississippi and Cuba).

TN=3

NAWCP draft score of 4, but no indication that threats as described are high enough to result in severe deterioration in the future suitability of non-breeding conditions *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.* (though they may be high [or higher] enough in some regions where populations are highly vulnerable to future habitat loss especially Mississippi and Cuba).

BD=1

Global breeding range exceeds 4 million km². NAWCP draft score of 3 is based on only North American breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (2.7 million km², lower than NatureServe estimate; does not include Siberian range) and using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

ND=3

Global non-breeding range is between 1 and 2 million km². NAWCP draft score of 4 is based on non-breeding range *+NAWCP, as the title indicates, is a plan for the conservation of waterbirds in North America* (3.8 million km², larger than NatureServe estimate), appears to inappropriately include breeding and migration range *+since ND refers to non-breeding range and since birds are not breeding when they are migrating, it is very appropriate to include migratory habitats in consideration of non-breeding range. NAWCP is committed to conserving the habitats used by waterbirds for the entire time they are present in the plan area. An understanding of ND that includes all non-breeding activity helps us meet our objectives of protecting birds in NA regardless of activity.*, and uses the log transformed quintile approach, which uses different breaks than breeding does, including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

Moderate Concern continentally under NAWCP does not appear to be justified given the above information, Lowest Concern would be more appropriate (unless trend proves to not represent a large population increase overall). However, regional population declines and/or very high elevated threats do warrant High or Highest concern status in Mississippi and Cuba. *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's Low—Moderate Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion*

in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.

Using PIF scoring criteria in the NAWCP framework would support this from Moderate to Lowest concern. PIF would not consider this species of continental concern, but would recognize this species as of regional concern in need of management (or higher) attention in Mississippi and Cuba.

Whooping Crane

PT=5, large population decreases

Substantial historical declines have not been cancelled out by encouraging trends for this species in recent years (due to massive recovery efforts); NAWCP draft score indicate apparent increase (though information suggests it should be PT=1 using NAWCP criteria?). How can a clearly imperiled species, which has only recently shown increasing trends, legitimately be scored low for population trend when it is still less than 1/3 of its estimated circa 1860 population size (which was still small at 1300-1400 individuals)? *+NAWCP and PIF consider population trend within the past 30 years; considering historical trends violates PIF's definition of population trend*

PS=5

Global population as of October 2005 is 477 i including both wild (341 i) and captive (136 i) populations (<50,000), broken down below. NAWCP draft score of 5 is based on using the log transformed quintile approach including only data from colonially breeding waterbird species. *+The objection expressed here is trivial and irrelevant. A cursory examination of the range of marshbird population sizes would have assured the reviewer that a recalculation is unnecessary. The log-transformed scale is not affected by including the marshbird data because the range of population sizes falls within the size range of colonially-nesting species.*

With a total of 477 this species using NAWCP criteria is only 3 birds below receiving a PS score of 4. How can this be justified for one of the rarest species in the world?

Recent population breakdown:

Aransas/Wood Buffalo—215 ba (73 pairs); FL resident –60 ba (14 pairs); WI-FL migratory 42 ba (2 pairs) and 24 yg; and Captive-126 ba (32 pairs) and 10 yg

TB=5, high risk of extinction, conditions not likely to improve

NAWCP draft score of 4, but under NAWCP rules how is this possible as “known threats are actually occurring and can be documented” (as with just about all marshbirds) justifying TB=5? Regardless of how we try to apply poorly defined NAWCP criteria, ongoing threats as defined (future potential for habitat alteration, depredation, low fecundity) are clearly high enough to result in extreme deterioration in the future suitability of breeding conditions leading to species potential extinction. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.*

TN=5, high risk of extinction, conditions not likely to improve

NAWCP draft score of 4, no information provided, but under NAWCP rules how is this possible as “known threats are actually occurring and can be documented” (as with just about all marshbirds) justifying TN=5? Regardless of how we try to apply poorly defined NAWCP criteria, ongoing threats (future potential for habitat alteration, collisions with human structures, illegal shooting) are clearly high enough to result in extreme deterioration in the future suitability of non-breeding conditions leading to species potential extinction. *+NAWCP threats descriptions were not developed to speculate on future conditions. Rather waterbird threats descriptions contribute to an assessment of current status. It is difficult enough to compile valid information on current*

effects of factors impinging on breeding and non-breeding populations, without guessing as to what the future holds.

BD=5

Global breeding range is below 500,000 km². NAWCP draft score of 5 is based on breeding range (18,900 km²) and using the log transformed quintile approach including only data from colonially breeding waterbird species.

+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.

ND=5

Global non-breeding is below 500,000 km². NAWCP draft score of 5 is based on non-breeding range (71,000 km²), and uses the log transformed quintile approach, which uses different breaks than breeding does (does not matter here), including only data from colonially breeding waterbird species. *+The objection expressed here reveals confusion on the part of the reviewer with regard to the log-transformed scale developed for all quantitative factors used in the NAWCP status assessment. Quintile thresholds developed with colonial species range data would not change upon inclusion of marshbird range data unless the marshbird ranges fell outside the overall spread of values. Since they do not for BD or ND, this is an irrelevant issue.*

Conservation Status

High Concern continentally under NAWCP does not appear to be justified given the above information, *+Fifty recognized experts in marshbird biology and conservation determined this species belongs in NAWCP's High Concern category. The justification for this decision is contained in the species profiles and comments from experts. Regional working groups have discretion in elevating or demoting the conservation status of species determined at the continental scale for purposes of regional conservation implementation.* Highest Concern is clearly justified with scores of 4 or 5 for all factors other than PT for NAWCP, but PT driven rule to justify Highest Concern prohibit this highly vulnerable species from Highest Concern status. How is it that Guam Rail with also a steep increase in population size in recent years is not treated the same way Whooping Crane is?

Using PIF scoring criteria in the NAWCP framework would support this shift from High to Highest concern. PIF would consider this species of continental concern in need of critical recovery attention for all populations.